Title	Influenza with some special symptoms and relations as noted in West Hartlepool during the years 1892 - 1896
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Qualification	MD
Year	1896

Digitisation Notes:

- Pagination error, page 52 missing from original but content continuous

THESIS

ON

"INFLUENZA"

With Some Special Symptoms and Relations as noted in West Hartlepool during the years 1892-1896.

BY

W. GRAY, M.B.,C.M.

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I N F L U E N Z A .

Influenza cannot be said to be a new disease or a new discovery, yet some of its symptoms, relationships, etc., hitherto not fully described, are worthy of consideration.

It is somewhat difficult to estimate when it was first recognised or described. Fagge, in his "Principles and Practice of Medicine" suggests that its history probably dates from antiquity.

Looking into its historical records we find mention made of it under one or other of its various synonyms from the year 1510 down to the present date at intervals according as to when the epidemics occurred, e.g., 1557, 1729, 1732-33, 1737-42, 1758, 1762, 1767, 1775, 1782, 1803-33, 1837, 1847, 1889-90, etc.,

The name"Influenza"was first introduced in the year 1741 by the Italians, who, imagining that it was due in some way to the "Influence of the Stars"

adopted that term for the disease.

Other synonyms are also known, e.g.,

Tuss's Epidemic (Sydenham).

Catarrhus e contagio (Cullen).

Epidemic Catarrh (R.C.P. Nomenclature).

La Grippe (French). Grippe (German).

Chinese Fever (This name is given to the disease from the idea that it arose and had its origin somewhere in Chinese Tartary).

Within the last 5 or 10 years we find suggestions from various quarters as to a more suitable nomenclature, e.g.,

Lyons - Lancet 2/91 - suggests "Centro-Neural Fever.

Anonymous writer in the same column suggests the somewhat vague terms "Misery Fever" and "Sweating Sickness.

The disease is described by patients occasionally, unconsciously, no doubt, that is to say, ignorant of the nature of the ailment from which they are suffering as "Feverish Cold".

It is necessary, in order that we may trace some relationship between the "Influenza of 1741" and the "Influenza" as we know and see it, to refer somewhat briefly to some of the older descriptions of the symptoms, etc., etc., e.g.

Baker. Opuscula Medica - published 1762 - writes .... Heats and chills alternately, cough troublesome, dry, sometimes with a little thin mucous expectoration, depression of strength, sense of weight, severe pains in forehead and temple, inflamed, swollen, and watery eyes, photophobia, sneezing, altered voice, painful rawness in windpipe and chest, and, in some cases, a feeling of choking, wandering pains in arms and legs and sides, fever, chiefly nocturnal, but so slight that it does not interfere with sleep or food, perspiration, more or less profuse, and when profuse the disease was relieved, tongue white and thickly furred, urine dark, threw down a furfuraceous deposit. In all cases depression of spirits and loss of strength more than the character of the disease seemed to account for. Convalescence tedious and lengthy.

Watson. (Lectures on Practice of Physic) gives a review and description of the symptoms etc., as they occurred previous to 1761. He enters somewhat fully into the writings on the subject by various authorities, e.g., he quotes "Yussier" in 1773 ..... "after extensive fogs more dense than the darkness of Egypt". "Petel" .... ushered in by thick noisesome fogs". Watson also mentions an epidemic that visited the Shire of Galloway in Scotland in 1775. ....." a continued dark fog and peculiarly smoking smell prevailed in the atmosphere, for several weeks the sun was seldom seen".

Watson also quotes Darwin's reference to the disease. "..... Sun was for many weeks obscured by a dry fog and appeared red as through a common mist. The material which was rendering the air muddy probably caused the Epidemic Catarrh which prevailed".

DEFINITION OF THE DISEASE.

Influenza is now by the majority of authorities admitted under the class of diseases known as "Fevers".

When therefore we place Influenza in the group or class of diseases - Fevers - we give it a definition that implies a somewhat more extensive condition of affairs than a mere or simple "Catarrh". Catarrh is often associated with Influenza, but such a name would not include or fully describe the malady. Influenza, then being a Fever, is a morbid process, consisting in increased tissue waste, co-existant with diminished function of the excretory apparatus of the body.

The characteristics of the malady are similar to those of Fever generally, viz., increased temperature plus general functional disorder in the various systems of the body. Mere elevation of temperature does not fully describe a fever process, no more does it the influenza process.

Fevers are capable of sub-division into various types, so also Influenza.

Influenza will not permit of a classification so accurate as that of Fevers at present, but it simplifies matters if we, at least, make an attempt at classification.

It will suffice then merely to indicate generally one or more of the classifications that have been proposed and used by various authorities, e.g.

1. A. Influenza of a Catarrhal nature, with such symptoms as Laryngitis, etc.,
   B. Influenza affecting the Gastric system more than the other.
   C. Influenza affecting the nervous system.
2. A. Epidemic Catarrhal Fever, chiefly involving the Respiratory systems.
   B. Influenza involving Gastro-Intestinal systems.
   C. Influenza involving Nervous system.

This latter classification is practically the same as that adopted by Prof. Grainger Stewart, in his Presedential address at the annual meeting of the British Medical Association in 1894.

Some writers seem to recognise a more or less simple uncomplicated type which they call "Simple Catarrhal Fever". The majority of cases of Influenza, however, present some symptoms which would justify their being placed in one or other of the other groups Nervous, Gastric, etc.,

The results of personal observation lead me to suggest a further, somewhat broader, classification, that is already used in many diseases, e.g. Rheumatism, etc.,

Undoubtedly, I think, we meet with Acute and less Acute Cases, and there are a certain number of cases where the patient seems to suffer more or less continuously from Influenzal symptoms. Hence the classification I would suggest as including the usual divisions and capable of further sub-division if desired, is,

A. Acute.

B. Sub-acute.

C. Chronic.

Under the Chronic group I would seek to include, not so much the cases that are recognizable as relapses, as cases that, as I have already mentioned, seem to suffer almost continuously.

RELATIONSHIP TO ATMOSPHERE AND OTHER INFLUENCES.

The views, indicating the relationship of Influenza to atmospheric conditions, that have from time to time been promulgated, if now not definitely disproved are at all events almost without any supporting testimony during the last epidemics.

For example;-

(a). It was at one time supposed that an epidemic in invading various places travelled at a rate at which it was impossible for human beings to travel. Now there are few localities, even villages, in England, that cannot be reached by a 24 hours journey from London and there is no evidence to prove that Influenza travels faster - in fact it will be shown to have a close relationship to human intercourse under another heading.

(b). There would seem to be little or no relation to any atmospheric condition. In West Hartlepool one of the worst epidemics that we have yet had, occurred in July, and in an exceedingly fine July. In 1895 the rainfall then was at its lowest in Feb-

ruary and May (being .8 and .3 inches respectively). During February the Influenza was most severe and it was almost entirely absent during May. It seems almost impossible to trace any relationship between Influenza and the rainfall.

(c). It has also been suggested that its beginning in any given place was characterised by the simultaneous seizure of a large number of people - indicating, no doubt, the probability of an atmospheric relationship, but now it is definately acknowledged that, in the majority of instances, its beginning can be traced to the involvement of a limited number of individuals - frequently only one.

CONTAGION, &c., OF INFLUENZA.

Some of the earlier writers on the subject of Influenza seem to have had an idea that it was a contagious condition - for example;-

Cullen, over 100 years ago, named the disease Catarrhus e Contagio.-

In 1743 when Rome was affected the Pope ordered a land quarantine to check its spread - and about the same time a ship at Messina, suspected of being the medium of conveyance of infection was ordered to be burned and all the letters for foreign ports fumigated. (Med. Comm.; Vol. 1. P. 61.)

In 1782 Dr Clarke stated he considered that the disease was brought to Shields from London.

In 1782 also, Haygarth of Chester (quoted by Sisley Lancet 2/91 - 1094) stated that

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2. At Malpas the first patient was the landlady of the inn, then her family were all affected, as a rule, sooner than any one else in the town.

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3. First patient in Middlewich came from Liverpool.

4. First patient ill in Mold had been to Chester a few days previously visiting a family of relatives ill of the distemper.

5. A gentleman arrived at Oswestry, ill of Influenza, before any of the other inhabitants were attacked.

6. At Tarporley, the first patient was a postillion who had driven a chaise from Warrington where the disease prevailed. During some of the later epidemics the infection of the Isle of Man was traced to a Liverpool yacht.

Grasset (Lecons sur la Grippe de L'Hiver -89-90 par le Professeur Grasset) quotes the Authority and report of Bordon of Frontignon ..... "the origin of the attack in this town could be traced to a merchant who returned from Paris suffering from the disease. In the evening he gave a dinner to 10 persons. In 2 days 5 out of the 10 were seized with Influenza.

Mease. (Med. Com. Vol. 1. P. 56.) says "I have no

shadow of doubt that the disease is contagious and am certain that I myself received infection from a small trunk of wearing apparel that came from Dublin, where it was raging. I may mention that this was the first introduction into the town".

Clement-Dukes (L. 2/91. P.1183) in an account of an Epidemic attacking Rugby School, says "We may assume the infection hypothesis".

Sisley (L. 1/91. P. 1445.)

1. No doubt the disease is infectious.
2. Isolated cases precede general infection of community.
3. The part played by contagion is important.
4. There is some evidence of spread by goods.
5. Influenza does not spread by preliminary contamination of the atmosphere; but the atmosphere is contaminated by individuals who suffer from Influenza.

In the later epidemics in this country it has been noted, that, as a general rule, the first parts to be affected were ports of entrance and large

business centres. Market towns are usually attacked before surrounding towns and villages, and in different villages in the same neighbourhood the outbreak of the attack is not recorded as simultaneous; an interval of days and weeks often occurs in such places between the dates of outbreak. Such records would tend strongly to impress one with the idea of personal contagion - certainly would put aside the idea of atmospheric conditions as a cause.

Broster of Wirksworth gives (through Bruce Low, L.2/91) an illustration of the spread of Influenza by contagion.

"Mr X, a music teacher, went from North Derbyshire on April 6th. 1891 to Sheffield, to see his two sisters then ill with Influenza. He returned on April 7th. He fell ill on the 9th. but struggled through his work and was completely exhausted in the evening. On April 10th. temperature was 104"F. and he passed through a typical attack of Influenza, with a relapse on getting up too soon. On April 9th. Mr X gave a music lesson to some pupils at Miss A's school. None of them contracted Influenza. Later

in the day he gave a lesson to Miss B., who became ill with the malady on the 11th. At another house, just afterwards, X. gave a lesson to Miss C., who also began with the Influenza on April 11th., and to Miss D. who also began on April 11th. In the evening of the 9th, X. gave a lesson to a small choral society in a village schoolroom. Five of the scholars began to be ill on the 11th. Of the 5 at least 4 had stayed behind after the class in conversation with X. So far as is known or ascertained the above mentioned were all the places visited by X. that day - April 9th. and no fewer than 10 persons developed the disease on the 11th. The only condition common to all was the contact with X.

On April 12th the married couple with whom X. was lodging were both taken ill with Influenza, both had waited on X. Up till the 9th April no cases of Influenza - to Brosten's knowledge - had occurred in the locality. From April 11th. the disease spread rapidly.

Parsons in L.G.B. reports on epidemic 1889-92, quotes an example from Ireland, sent to him from Blakeley of

Five-mile Town, Tyrone;-

"A gentleman, residing in Manchester, who had a slight attack of Influenza a week before, left on Friday May 15th 1891, with his wife and two children, on a visit to his parents in Ireland. On the following day his eldest child was seized and two days later his youngest child. Within a week his wife, father, mother, and two sisters were all down with Influenza, the only person in the house who escaped was a female servant who had the disease in 1890. Two other members of the family, who were sent to stay at a house 200 yards away and were kept away from those who were ill, escaped. There were no other cases in the village at the time".

Blakeley adds, "From my own experience of the epidemic last year and what occurred in this family I am of opinion that it is contagious. The fact that it did not spread is due, I believe, to the precautions taken to prevent any coming in contact with those who were ill. Disinfection we carried out to the utmost extent".

Personally I have been unable to trace the

introduction into the locality here, no doubt due to the fact that the channels are numerous, but in several cases have noticed that there were strong suspicions as to the mode of introduction.

The contagion, however, from patient to patient, in many instances, is quite distinct and characteristic.

INCUBATION PERIOD.

Some of the examples quoted under the last heading serve to show the period of incubation. It is impossible to state definately what is the exact period of Incubation of Influenza, but one can easily determine its limits in a large number of cases.

Bampton (Ilkley in Wharfdale) L.2/91, P.13. gives a short history of ~~the history of~~ the contagion of Influenza and from that one gathers that his idea of period of incubation was 8 days.

Stanwell, L.1/91, P.1093, in observation of 53 cases quotes incubation period 3-7 days.

Boulting, Brit. Med. Journ. 2/91, P.189. from note of 500 cases quotes 2 to 3 days.

In cases under my own notice I have found incubation period 15 hours (in a few instances) to 2 or 3 days. The latter (2-3 days) I am led to regard as the average.

As an example of an extremely short period of incubation we may mention the following;-

"A physician in Zurich saw some cases of Influenza - half an hour after, while returning home, was

seized with the symptoms." This testimony is unreliable in detail, for example, it is not stated if he had ever previously seen any Influenza cases.

WHEN DOES INFECTION BEGIN AND HOW LONG DOES IT LAST?

As in some other fevers this is a much discussed question.

Caldwell-Smith in his health report says "In from 12 to 24 hours I believe the disease is infectious; the poison is most virulent when the temperature is at its highest. The power of infection lasts for 8 days after the temperature has fallen".

Bampton. L.2/91, P.13., "Probably infectious from the earliest manifestations of the symptoms".

Cuff (Medical Officer's Report for Scarborough 1892) "It seems that the disease is infectious within the first 24 hours of its course.... and that the infection lasts 5-6 days".

Jackson, (Barnstaple) referred to by Parsons in L.G.B. report 1889-92. quotes a case where Influenza seems to have been imported by a patient 5 weeks after the recovery from the acute symptoms.

I am inclined to believe that the period of infectivity has some relation to the period at which the symptoms are most acute - but that such relation is not invariable. In the majority of cases seen by me it would appear that such was the case - in none have I been able to trace infection in less than 12 hours after earliest recognisable symptoms.

LOCALITY & CLASS OF PEOPLE AFFECTED.

It does not appear, from a survey of the literature on the subject, that there is any possible relationship between Influenza and locality. Nor is it particularly evident that the disease affects the more unsanitary parts and localities. Certainly it is extremely prevalent in parts where the best and most modern sanitary arrangements are in force.

It is noticeable, however, that, although bad sanitation has little to do with the occurrence of Influenza, it has an effect on the complications and the mortality resulting therefrom, e.g. if Pulmonary complications supervene on an attack of Influenza occurring in an unhealthy locality the ul-

timate chance of recovery is much less than in cases in a healthier, that is, more sanitary, neighbourhood.

As regards the class of people affected there is no evidence that one section of a community is more liable to an attack of Influenza than another. From observation of cases, however, I have formed an opinion that occupation may have some little to do with the type of attack, e.g., in business men and men engaged in mental - as opposed to manual-labour the affection of the nervous system is more frequent than the affection of the respiratory. And again in labourers, blast furnacemen, etc. one meets more frequently with pulmonary types and complications.

It is impossible to draw a hard and fast distinction as to the class affected and the type of affection, but one gets indications as mentioned above from observation in a series of cases.

In children I have found that, as a general rule, the symptoms are slighter than in adults (this description refers more particularly to the more robust and healthy among adults and children). The onset is more sudden in children than in adults and

the recovery not so slow. Frequently one gets the history of a child, apparently quite well perhaps half an hour or less previously, being suddenly seized with an attack of vomiting and diarrhoea, in no way to be accounted for by error of diet, or seized with an attack of fainting or squeamishness. In a very short time after onset of such symptoms the child is rapidly depressed; an expression, not at all rare in this locality, is used to describe this state of depression viz;- "dead felled". It is difficult for the laity, and indeed for many of the medical profession, to select words that would picture more accurately the state of matters.

The temperature in children frequently within 2 or 3 hours of onset of symptoms reaches 103°F.or 104°F., but, in cases without complications, an equally rapid fall of temperature is often observed.

In the more severe cases among children, however, some of the symptoms are equally, if not more, marked than in adults.

A most important and characteristic symptom of the disease among children is the rapidity and

extent of wasting of muscles. In none of the other diseases of children have I noticed this symptom so prominent, early and well marked.

Giddiness is also an extremely common symptom of the disease among children.

The diagnosis of Influenza is often in children rendered extremely difficult by reason of the complications that are liable to occur. In several cases of Influenza I have seen rashes that closely simulated the rash of scarlet fever. The tongue is such cases is not so distinctly "strawberry" and there is seldom albumen in the urine:- Desquamation does not follow the Influenzal rash as in Scarlet Fever. In some of the other rashes, however, seen in children desquamation has been noticed but it is not so extensive as in Scarlet Fever.

The tendency to Broncho-Pneumonia has been somewhat striking during the epidemics of the last few years here. Frequently one has been led to suspect the presence of a pneumonic condition but unable to find definite physical signs, with the exception perhaps of a temperature that keeps high for some

time without other apparent cause, and the peculiar, almost hyper-resonant, percussion note obtainable posteriorly frequently in the region of the angle of the scapula. The expectoration gives no guide as to the lung affection that is going on, in fact my experience has been, that in Pneumonia occurring with Influenza, it is the exception and not the rule to find anything approaching rusty sputum. In children, more especially, the expectoration is extremely small in quantity.

In children also one finds that the frequency of breathing is great and out of all proportion to the physical signs and to the pulse rate. Perspiration in children as a rule has not been noticed to be profuse as compared with adults. The cough is often a very troublesome symptom, and frequently persists long after the child is otherwise well. During the night the child is frequently awakened - more especially about 2 to 4 a.m. - with a hard hacking spasmodic cough, not unfrequently simulating whooping cough but exhibiting no true whoop. In addition this cough is not apparently aggravated by fright, presence of a stranger, etc., to such an

extent as in whooping cough.

Otitis Media with some purulent discharge is not an uncommon complication.

Loss of power of vision, especially amongst children at school, is of frequent occurrence. But this latter is usually speedily amenable to treatment by rest to general system and more especially to the eyes, with some simple tonic, for example, Parrish's Food, etc.

Meningeal symptoms are often noticed but as a rule the duration is not prolonged and the after-results are few.

Disordered states of digestion and bowels are sometimes troublesome and persistent. In a few cases a tendency to Jaundice has been noticed.

Infants at the breast seem readily to get the disease from the mother but beyond a slight nasal and conjunctival catarrh and slight digestive troubles no serious consequences have come under my notice.

The separation of the umbilical cord is frequently delayed when Influenza supervenes and the sore that is left is often irritable and slow of healing.

IMMUNITY.

It is extremely doubtful if there exists such a thing as immunity against Influenza. From the majority of cases we draw the lesson that, instead of an attack preventing or to any apparent extent mitigating the severity of a further attack, the contrary would seem to hold good - that is, that one attack predisposes to another - Once Influenza, always Influenza. However, in the history of patients who seem to have suffered almost continually from the malady for a long time, in other words, who seem to be in a state of Chronic Influenza, there comes a time, when, although as much and as continually exposed to infection as before, they are no longer susceptible. Such instances of necessity give one claim to think that after a time the disease may, either confer an immunity from further attacks, or have exhausted all the suitable soil for its germs that exists in the system.

In addition one meets individuals who, although continually in contact with persons suffering from Influenza, never seem to shew the slightest

evidence of having been infected with the disease. The question then arises, are we to look upon such individuals as naturally immune, or simply as individuals whose general constitution is so good that it is proof against all such maladies. Looking at the latter group of individuals and such as I have designated by the term Chronic Influenza I am inclined to think that there is some slight degree of immunity in a few individuals.

As to conferred immunity:-

Brurchettini (Deutsch Medicinish Wochenschrift No.33, 1893.) claims to have found the bacillus of Influenza (this claim is strongly contested by Pfeiffer) and to have conferred immunity from further attack in rabbits. (Vide L. 2/93. P.1587.)

General resume of his statements and results:-

Rabbits are easily innoculated, so that when subsequently treated with Influenza Bacillus Cultures they remain unaffected. Serum of strength 1 to 42,000 of body weight was used. He also states that such serum had curative properties, - if injec-

ted into rabbits already inoculated the temperature fell, animals dying in a few days. Confirmation for such treatment is, as yet, wanting.

PATHOLOGY.

Numerous observers have claimed to have discovered the pathogenic organism in relation to Influenza but as yet none of the so-described organisms have passed through all the testing claims of Koch's formula in relation to such - in fact all have failed when it came to prove that cultivations when inoculated could produce a disease similar in every essential respect to that met with clinically. The general opinion is now in the direction of a microbic causation.

Seminola (New York Med.Journ. 1891) gave expression to his views on the latter theory in the following terms, viz:-

"There exist many reasons for assuming that its nature, and consequently its origin, is parasitic, for it would be difficult to explain how the

animal organism, after suffering from Influenza, could experience such a diminution of its power of resistence to those disintegrating manifestations, which none but a microbic and violent agency (as if leaven had entered into the system) seems capable of producing. But for all that there may be a cosmo-telluric condition, undetermined and undeterminable, capable of producing very serious disturbances."

Pfeiffer, during the 1889-90 epidemic photographed the bacillus known now by his name. In 1891 in the sputum he found numerous bacilli, distinctive as regards their staining and culture properties. Pfeiffer's bacillus has been found in the phlegm and other discharges of patients suffering from Influenza with a frequency, sufficiently unvarying, to enable us to look upon it as well nigh pathognomic of the disease - in fact it has not been met with under other circumstances. As yet, however, it does not appear to have passed the full test of Koch's formula.

Were this not intended to be more a clinical than a pathological paper, numerous interesting

questions in relation to the mode of action of the Bacilli might be discussed - for example - Does the bacillus produce the Catarrh? Is the bacillus present in the body of anyone during an epidemic and only allowed scope for development and action when the system is subjected to some influence lowering vitality? Can the bacillus be made to grow in media other than those of the human body? etc., etc.

GENERAL SYMPTOMS.

In the milder types of the disease the general symptoms may vary greatly; but in the more distinct and severe types the symptoms are almost characteristic. The majority of such indications are familiar to nearly everyone, but one or two that seem to have struck me as prominent, important, and fairly constant, will be included in this description.

The onset of the disease is nearly always sudden; it may be ushered in with a distinct rigor, more frequently by a feeling of general chilliness, down the back, in the limbs, etc., alternating with a sensation of burning or flushing in the same re-

gions. With such hot and cold sensations there is frequently nausea and heaviness, not uncommonly attributed by the sufferers to a bilious attack.

Giddiness is another, and in my experience, an extremely common and typical early symptom. The patient frequently retires to bed without feeling at all out of sorts and in getting out of bed in the morning may stagger round the room, in some cases actually falls on the bed or the floor. Nor is this symptom found more especially in patients with some cardiac affection, or some nervous affection, where one might be led to suppose some pre-existing cause - but in the more robust type of patients with a previously good bill of health. In children also it is a prominent symptom. When there is a distinct rigor in about 3 or 4 hours one finds the temperature has risen several degrees, perhaps 102°F. or 104°F. At this position it remains, in cases without complication, for about 2 or 3 days - evidencing slight morning remissions. After, generally, 3 days there is a distinct and frequently sudden fall to approaching normal again.

For the first 2 or 3 days one finds the pains and fever marked, then the feeling of prostration sets in and lasts a variable period, 5 or more days.

Pains are characteristic - e.g., headache, chiefly at the beginning, frontal, in the temples, across the eyebrows, and referred to the back of the head and neck. In addition to such pains in the temples there is associated a feeling of constriction or tightness - sometimes graphically described by patients "as if an elastic band was stretched round the forehead tightly" or "as if a bolt was passed through the temples and tightly screwed up." At later stages, after say the 4th or 5th day, there is not uncommonly a pain in the vault of the cranium, sometimes described as a "heavy weight or oppression," or "lifting" and "beating in character". Such pains are not uncommonly much aggravated by stimulants, alcoholic and otherwise and by too large and heavy meals and are doubtless the analogues of the headaches found in some stages of Dyspepsia, etc. Pain

is also present in the eyeballs, and may or may not be accompanied by sensations of particles of sand under the eyelids or fulness at the back of eyeballs as if something were pushing the balls forward - pain of a distinct and severe character is often felt also at the back of the eyeballs, there is also with such eye symptoms an indisposition or inability to keep the eyes open, with photophobia, conjunctivitis, etc. Pains also in the limbs, down the calves of the legs, sometimes fixed, but frequently sharp and shooting in character. In the majority of cases such pains appear to be confined to the muscles but occasionally pains of a more deep-seated character are met with. Mitchell-Bruce, L. 1/91. P.1191., has referred to the latter class of pains as "break-bone". he also mentions that there is inability to keep the aching parts still, similar to the feeling experienced after great muscular over-exertion. My experience, however, has been that with such pains there is a distinct disinclination and inability to move the limbs. One is frequently told by patients "I daren't move my legs" or "I can't move the legs."

Such limb pains are sometimes referred to the tips of the toes and fingers - with a feeling of numbness in the latter regions.

In the chest pains are also met with of an equally distinctive character, e.g.,

In the epi-sternal notch - associated with a dry, hard, hacking, irritative cough, described by some London Physicians a few years ago as "The ineffective cough of Influenza". As a rule there is no phlegm brought up, or at the most, only a few pellets about the size of a split pea.

In addition to the pain in the epi-sternal notch there is a feeling of weight or oppression or a tightness on the upper part of the thorax, an inability to brace up the shoulders freely, sometimes, especially if there is much cough, there is a "raw" "hoarse" feeling described in the same region. Towards the lower part of the thorax, anteriorly, on careful examination one can get a history of pain or tenderness on the lower ribs about the junction of costal cartilages. In elderly patients, on the left side this is often a source of great trouble and

uneasiness, more especially as in such patients who have Influenza there is a great tendency to flatulence and distended stomach. The distended organ presses on the painful lower ribs and, in many cases, causes great agony of mind. Patients are apt to infer from such symptoms that there is some heart affection or disease. On careful examination of chest wall anteriorly there is in many instances quite a distinct pain in the regions corresponding to the costo-chondral articulations. This symptom is occasionally mentioned by patients, but, if not, in cases of moderate severity even, it is elicted on pressure. In two cases - both females - a distinct enlargement has been easily noticeable in that region in addition to pain. In neither could a rheumatic or rickety tendency be made out. In association with the pains just described there is frequently an irritable and somewhat painful condition of the pericardium, with more or less irregularity of heart's action. It does not appear to be an actual distinct inflammatory condition but more of the type of a neuralgic affection.

It is in this class of patients that one most frequently gets an irregular, intermittent pulse. The term intermittent is perhaps too distinct and definite to suitably describe the real state and character of the pulse, it gives one more the impression of a delayed, almost abortive, beat interposed occasionally.

Further in the external examination of the chest wall one frequently detects painful spots, irregular in distribution, along the lines of the inter-costal nerves.

Pains are also complained of in the loins, hips and shoulders. Tenderness to touch along the spine with numbness in limbs is occasionally made out.

After a period varying from 6 to 24 or 36 hours perspiration of an exceedingly free character, sometimes with a peculiar "mousey" odour, is established. With the commencement of the perspiration there is often an abatement of severity of limb and trunk pains, seldom such noticed in the head pains.

After the perspiration is established the

depression and weakness often become more intense. There may be running at the nose and eyes, sometimes associated with, for the first few hours of the attack, polyuria. Epistaxis in a few cases has been noted. In the earlier stages in addition most of the symptoms met with in a state of fever are noticed, e.g.,

General restlessness of body and mind; Irritability of the whole system, more especially is this irritable peevish symptom made out in children, where it is quickly displaced by a stage of great depression., the "dead felled" appearance being established. Loss of appetite, nausea, vomiting, (sometimes severe and persistent), purging, scanty, high-coloured urine (sometimes containing albumen, more often an abundance of urates). Tongue furred, yellowish brown, sordes around teeth, sore throat, follicular tonsillitis. With such throats there is a scanty viscid, tenacious, almost transparent, mucous secreted. Flatulence, pyrosis, etc., sometimes a severe abdominal pain, irregularly distributed, of a neuralgic type. Inability on the part of patient for

concentration of thoughts and sometimes hesitation in speech - as if the idea was formed perfectly, but words for expression were wanting. Drowsiness - in the stage after the acute symptoms have passed off the drowsiness is characteristic. As to the time of occurrence - it is most specially noticeable about 3 to 5 p.m., about that time the patient seems to "fall off" as the friends describe the condition, later, about 8 p.m. the patient seems to become much more wakeful, lively, and cheerful, and continues so till about 11 or 12 at night.

The rest is frequently of a disturbed character. Often the patient lies awake for several hours before going off to sleep. Even if a little snatch of sleep is obtained it is often disturbed and unrefreshing, because of the occurrence of dreams. Such dreams are of two varieties, pleasant and horrible, but nearly always confused in character. The patient is aware that the dream has occurred but is generally unable to tell what was the subject of it. Often several dreams appear to be mixed up in one. Frequently the patient, especially a child, wakes up

with a sudden start, perhaps a shriek, having the idea that a sudden catastrophe has been imminent. Should the patient manage to get some sleep in the earlier part of the night, almost invariably a stage of restlessness and wakefulness comes on about 3 to 4 o'clock in the morning. Often this wakening in the early morning is prolonged after convalescence is established. There is for a time after an inability for further sleep, but usually at the time when the patient should naturally get up out of bed a most intense feeling of drowsiness came on. Patients often complain that they are wakeful in the evening, when they ought to be sleepy, and drowsy in the morning, when they ought to be wakeful.

Thus then we have somewhat broadly indicated the more general symptoms and characteristics of the Influenzal attack. Before proceeding further, however, a few words may be said as to the mode of ending, of the more acute physical stage, more especially. We have already noted that the onset has been sudden, with, it may be, attacks of shivering, vomiting,

purging, polyuria, running at the eyes and nose occas-ionally. The crisis, so to speak, of the more acute stage is almost as typical as the onset. Frequently I have noticed a rapid and almost unexpected fall of temperature, with an equally sudden feeling of relief, this latter, however, is the exception and not the rule. Accompanying this sudden fall of temperature the crisis is not uncommonly, according to my experience, ushered in by an attack of purging. Coming at such a time it is apt to cause unnecessary alarm, but may, if accompanied by a moderate fall of temperature - not below normal - be looked upon as quite a favourable omen.

The explanation of such a phenomenon is open to a great deal of argument, but I look upon it as one of Nature's attempts to rid the system of the poisonous products of the feverish condition - a process analogous, no doubt, to the free perspiration met with a few hours after the onset.

The consideration of some of the more important special symptoms that have come under my notice during the late epidemics will now be mentioned under the various systems.

Symptoms under the Various Systems of the Body, more especially some of the more important and uncommon.

ALIMENTARY.

For the alimentary system many of the symptoms are identical with the symptoms met with in the more common febrile states. For example:-

Loss of appetite, thirst, vomiting, constipation or diarrhoea and the various forms of dyspepsia, etc., etc.

Vomiting is in some cases a troublesome and rather persistent symptom. Occasionally after the contents of the stomach have been expelled, a sense of general relief is experienced. Many patients refer to the tendency to vomiting and give expression to their feelings somewhat in the following terms, "If I could only be well sick, I fancy I should feel much better." Undoubtedly relief is often obtained for a time after an attack of vomiting but occasionally haematemesis sets in and is liable to recur.

When the tendency to vomiting is at all marked the ingestion of even the slightest article of diet aggravates the condition. Such cases of vomiting in Influenza are, I consider, referable to nervous origin. With the nausea there may be a considerable amount of pain, not only in the bowels but diffused over the abdomen generally, of the nature of a Gastralgia and an Enteralgia.

The appetite is extremely variable and erratic. There may be a distinct craving for some particular article of diet, but by the time such is prepared there is no inclination for its ingestion. Not uncommonly patients describe a sensation that follows almost directly after a meal, a sinking, empty unsatisfied feeling at the pit of the stomach as if hunger was extreme. Not infrequently the appetite during an attack of Influenza is unaltered or increased. The action of the bowels is irregular and sluggish.

Flatulence, especially in elderly patients, is often noticed and has already been referred to as

an urgent symptom, giving rise to great distress and anxiety.

The tongue at the onset of the attack is usually furred. The covering is yellowish, white or greyish-white. In the gastro-intestinal type of the disease it may appear more of a brown colour. When the fur is not very thick the tongue may appear more or less "strawberry" like - not however the strawberry like tongue met with in Scarlet Fever. One might attempt to describe it as "pale or greyish-strawberry". The papillae on tongue are prominent, on the anterior half at the tip and sides more especially - of the size of a pin-head or slightly larger. In the posterior half, in the region of the circumvallate papillae there are larger and more fleshy looking elevations noticeable, some almost the size of a split pea.

After a time when the tongue begins to clear the appearance is interesting and fairly constant, The fur clears, as a rule at the tip, along the sides, and up the centre, producing purplish-red

areas in these regions. The clearing up of the centre takes place a little way outside the median raphe, and as a result two narrow reddish bands are noticed in that position. Even at a comparatively later stage in the attack these two bands are well marked. When the fur has cleared from the anterior two-thirds of the tongue a striking, purplish-red, glaring appearance is produced. Some one has spoken of this appearance as the "Magenta tongue". However, such a term is too matter-of-fact and pronounced to be applicable to the general run of cases.

Pinkish-white, jelly-like vesicles are often seen in the tongue in the acute stage of the disease. A similar vesicular appearance is seen in such cases on the palate as well and on the inner surfaces of the cheeks and lips. On puncturing such vesicle-like patches I have never succeeded in obtaining any fluid. They would appear to be brought about by a small extravasation beneath the upper layers of epithelium which pushes up the layer of epithelial lining.

Besides such symptoms as have already been mentioned under the Alimentary System, one sometimes comes across a case presenting a group of symptoms that closely simulate those of some of the more important serious diseases peculiar to that system more especially, for example, Typhoid Fever. As an illustration I quote the history, etc. of the following case that came under my own care.

J.H.R., aet 21 yrs., Insurance Agent, Seen Sept.17th. 1895.

The patient had been ailing more or less for 3 weeks previously but had not been confined to the house till Sept.15th.

Family History, good. Total abstainer. No Previous illness since childhood, when he had measles.

History of present illness:-

For the last three or four weeks the patient has felt tired and languid, more especially in the morning, exhausted before he got half way through the day's work, which was not

heavy. About a fortnight ago for several days at a time patient suffered from severe frontal headaches, pains in the back, legs and arms, sore throat, hard cough, troublesome night and morning, feeling of cold even when walking briskly, nausea and anorexia in the morning. Giddiness on getting out of bed and sometimes in the streets in the latter case more especially on looking up at the numbers on the doors.

Sept.17th. During the night he awoke in a cold shiver, felt sick and suffered from a severe "cramp in the bowels", with headache, etc.

Now, 10 a.m. Patient is lying in bed in the dorsal position, both legs drawn up. He complains of pain in temples, eyeballs, across the shoulders and in the abdomen. Hot salt bags and hot flannels have been tried for the relief of the abdominal pains but have as yet afforded little or no relief.

Alimentary System. Tongue shows a general covering of thick yellowish-brown moist fur. Teeth

covered with sordes, lips parched and tending to crack in places. Vomiting has been severe since about 2 a.m., accompanied by pain all over the abdomen. Bowels moved twice since about 2 a.m. Motions stated to be of a very light colour and irregularly liquid in consistence. No abdominal distension, pain not referable to any area in particular, and not increased on gentle pressure.

Respiratory System. Feeling of tightness and oppression on the upper part of the Thorax anteriorly, with pain on coughing. Irregular pains along the intercostal spaces. Hard, harsh, dry cough. On auscultation slight prolongation of expiration all over upper lobes, no accompaniments. Respirations 22 per minute. Percussion, no abnormality.

Circulatory System. Heart sounds pure, no murmur. Pulse 116 - soft - regular.

Integumentary System. Skin moist and clammy. Perspiration in drops on the forehead.

Urinary System. Small quantity, high-coloured,

strong smelling urine passed since last night.

Temperature. m. 100.8 and e. 103.4.

Treatment. Rest in bed. Hot flannels to abdomen and legs. Warm barley water and milk. Bismuth Submit. gr.IV. Morph. gr.1/3., every two or three hours for pain and sickness. Phenacetin gr.VII. every six hours to reduce the temperature.

In the evening. Vomiting less frequent, and severe since 11 a.m. Bowels moved twice since 10 a.m. Abdominal pains a little easier. Pains in legs and shoulders less. Headache more than in the morning. Throat inflamed. Right and left tonsils swollen.

P. 120. T. 103 4. R. 27.

Sept. 18th. Restless , dreaming night, but abdominal pain only felt occasionally and on movement. Abdomen distinctly resonant all over on percussion. No vomiting. Bowels relaxed once - about 7 a.m. Stools lighter and more greenish-yellow than yesterday. (This is only the opinion of the patient's friends). Consistence of stool regular but fluid. Tongue,

drier and darker brown than yesterday. Follicular patches on the right tonsil.

P. 100. T. 100 2. R. 22.

Urine, 1024, Acid, No albumen, Abundant deposit of urates.

Ordered a mixture of Acetate of Potash, 20 grs., Sp.Ammon. Co. mim. 30., every three hours in hot water. To continue the Phenacetin. Diet as before.

Evening. P. 108. T. 103 8. R. 24.

Patient more comfortable. Abdominal distension and pain less than in morning. Had a little sleep during the afternoon.

Sept. 19th. Restless night. Bowels moved twice during the night, stools the same in character. Patient feels depressed. Limb pains better. Headache severe. Abdominal pain almost absent. Resonance on percussion all over abdomen - except a small area about 2 in. by 4 in. in the upper and outer part of the right iliac region. Tenderness on gentle pressure over this area. Tongue more furred and drier.

P. 92, regular. T. 102 2.

Mixture was stopped. To continue with Bismuth and Morphia and same diet.

Evening. P. 98. T. 104 7. R. 27.

Bowels moved twice since morning.

Sept. 20th. Restless night, wandering.

Bowels have not acted since yesterday, ~~morning.~~

Patient is perspiring freely. Headache much less. Limbs pains occasional and more shooting in character. Tendency to occasional shivering. Eyes aching and painful to light. Abdominal pain absent. Resonance less, dull area only slightly extended (?). P. 82. T. 102 4.

Throat improved. Earache on the right side. Less pain in limbs, but a bruised feeling remaining. Tongue showing no alteration.

Evening. T. 104. P. 96. R. 29.

Pulse full, occasionally intermittent.

Patient semi-unconscious.

Ordered mixture of Acetate of Potash and Tinct. of Aconite. Phenacetin, grs VII., 4 hours.

Carnick's Liquid Peptonoids with milk.

Sept. 21st. Patient wandering and muttering till about 3 a.m. Since then a little sleep, 20 minutes or less, at intervals. Bowels relaxed, once during night, once in morning. About 10 a.m. patient feels less drowsy - feels exhausted - free from all pain except the ear-ache. For this he had Exalgine gr.1. in hot water, with Sp.Chlorof. Abdominal condition generally improved, resonance on percussion less, dull area diminishing, tenderness in that area. Tongue clearing at tip. Papillae well marked. Patches all off tonsils. No cough.

T. 101 7. P. 92.

Evening. Patient expressed himself as feeling better. Has taken more milk and peptonoids. Bowels moved once since morning, motion more solid. Earache better. P. 96. T. 104 4 (in both axillae) The general condition of the patient appeared more satisfactory, with the exception of the temperature. Nothing in diet could be

found to account for the rise.

To continue medicine, etc. Antipyrine 10 grs.

Sept. 22nd. Patient has passed a good night, not wandering. Intervals of sleep. Bowels not moved during the night. No pain. Abdominal distension almost nil. Dull area less, pain over same area less. Urine passed more freely, paler in colour. Sp. Gr. 1018. No albumen.

T. 101. P. 90. R. 23.

Tinct. Belladonna, mim.5, with each dose of mixture, to improve heart's action and control the tendency to wandering evidenced at times by the patient. A careful search for Typhoid spots was made but with negative results.

From now onwards the general state of the patient improved very gradually, the temperature altho' falling steadily still showed a tendency to evening rise. The tongue cleared slowly and the appetite tended to improve but remained variable for a length of time. There was a tendency to perspiration on the slightest movement, with occasional flushings.

Oct 2nd. Patient was allowed a little beef-tea and chicken broth. Mixture of Tr.Nuc.Vomic., Acetate of Potash and Infus.Calumb., with Phenac. in evening or when headache troubled.

Oct. 4th. Patient allowed a little fish.

Abdominal dulness and pain absent.

Bowels acting regularly once a day.

Rest, altho' variable, more satisfactory and refreshing. Appetite better.

Temperature from now to end of case never rose above 100"F.

Pulse gradually improved in force and volume.

Less tendency to perspiration on exertion.

Little or no headache, except occasionally at bed-time and after talking for some time.

Oct. 8th. Patient allowed small piece chicken breast, in addition to present diet.

Peptonoids still taken steadily.

Temperature, never now reached over 99"F.

Pulse 76, regular, better volume.

Bowels acting regularly. Appetite good.

Sleep improved.

Oct. 12th. Patient allowed out of bed to lie on a couch.

Mixture:- Syr. Hypophosph. Co.

Small mutton chop.

The recovery from now was uneventful and uninterrupted.

On Oct. 22nd. Patient went to the country to stay with some friends, and was able to resume his former employment in the beginning of November.

The case presented many interesting, yet difficult points of consideration. For a time the diagnosis was inclined to Typhoid. The symptoms were by no means typical of such but, for example, the temperature favoured that diagnosis. The tongue could never be said to be typhoidal, there were no typhoid spots, nor was the state of the abdomen or the bowels much guide in the differential diagnosis. The ratio of pulse and temperature at some stages was remarkable, one might almost add characteristic of Influenza.

It is worthy of note that the patient's parents, another brother and one sister, passed through moderate but typical attacks of Influenza while the above case was progressing. In none was there the least element of doubt as to the diagnosis.

One sister and one brother in the same house escaped having any attack.

The question naturally arises "Was it a case of mild Typhoid greatly modified by the occurrence of Influenza?" or "Was it simply Influenza with some peculiar, almost typhoidal symptoms?"

I consider that it was undoubtedly one of the many phases of Influenza simulating other diseases. Before and since I have met with cases of a similar character which have confirmed my opinion.

Bilateral swelling of the Parotid has also been observed in a few cases but the condition was of short duration.

Jaundice of a catarrhal nature also has been seen.

A copious haemorrhage from the bowels was

noticed in an Influenzal case in an adult.

CIRCULATORY SYSTEM.

In this system also there are many points of interest, notably perhaps, as already mentioned, the absence of anything approaching the usual ratio between the pulse rate and the temperature.

Fainting and giddiness are the early and frequent symptoms. With the fainting there is occasionally a pain associated, anginal in character but transient in duration. Irregularity of the heart's action is one of the most general symptoms to be met with in this system. Slow and quick heart's action, and occasionally intermittency, are seen. With the slow state of the heart Asthma of a spasmodic nature is found associated in a few cases, in others troublesome and rather persistent vomiting, irrespective of the nature and quantity of the contents of the stomach.

Such phenomena naturally lead one to seek an explanation in a disturbance of the nervous

mechanism controlling the heart in the Vagus and Cardiac Plexuses.

With the more rapid forms of irregularities there are often some of the symptoms of backward pressure, dropsy, etc., etc.

An explanation of such a condition, can, I think, be referred to some disturbance of the Inhibitory Nervous Mechanism.

Often such phenomena of rapid and slow heart's action exist without the knowledge of the patients. On the other hand they may be the cource of great mental anxiety on the part of the patient, more especially if they persist, as they not unfrequently do, during and even after the stage of convalescence. The state of the pulse is by no means constant, but a tendency to a slow rate is more marked than the opposite rate.

In young active robust patients, even in athletic young men, during an attack of Influenza, I have felt a soft weak and small pulse, sometimes intermittent and under 50 per minute. In one young man especially did it present this slow character

and in spite of all efforts at stimulation did it continue after the general convalescence was well established. However no other symptoms in the heart sounds were to be noted on the most careful and repeated examination.

Pericarditis has been noted in a few cases but more especially have I noted a state of Pericardium, not exactly amounting to an inflammatory condition, but what I would prefer to call and have already mentioned as, an irritable state of the Pericardium. On palpitation and auscultation no very constant physical signs made out, perhaps an occasional irregular rub on auscultation. Nearly always this was found associated with the painful condition of the ribs already referred to under General Symptoms.

Where there was pre-existing heart disease the supervention of an Influenzal attack has not, in my experience, produced the increase of phenomena, backwood pressure, etc., that I had expected to see. Oedema, of ankles, legs, etc., has been seen in a few dases but it was only transitory.

In the examination of the cardiac state during Influenza lately, I have found considerable help afforded by the use of the"Phenendoscope". Its use will not permit of the stethoscope being discontinued, but it is a useful adjunct in many instances.

RESPIRATORY SYSTEM.

Were I asked what had been my experience of the phenomena met with in the Respiratory System I should be much tempted to reply "Irregularity, Indefiniteness, Incompletion."

By such terms it is intended to express the state of matters in the Influenzal as compared with the Non-Influenzal or more or less normal state of disease.

In children Broncho-Pneumonia has been fairly common but not especially serious or fatal.

In adults, however, with a Pulmonary complication the condition has proved more serious and fatal. In the '93 and '94 epidemics pulmonary complications were more common and severe than in epi-

demics of '95 and the present year. This statement applies equally to all the complications during the years mentioned.

In the Respiratory System in the majority of instances the complications have commenced after the third day of the attack.

Before proceeding to the discussion of the Pulmonary affections it is well to note that frequently there is an extraordinary increase in the frequency of breathing - without the occurrence of explanatory physical signs.

Bronchitis presents a few peculiarities.

The onset is sudden. The dyspnoea is great. Patients speak of the difficulty of breathing as an "Oppression" or "weight" across the upper part of the chest anteriorly - often with a raw harsh pain behind the sternum. The cough is troublesome and as a rule is not associated with much expectoration. What phlegm there is is viscid, tenacious, glairy and difficult to expel. In many cases it is expelled only in small quantities morning and evening. The temperature may rise suddenly to 102"F. or 104"F. and remain at that

height for a considerable time.

On percussion a peculiar, almost hyper-resonant, note is elicted.

On auscultation scattered coarse ronchi are heard, sometimes a few rales at the base of the lungs.

Great prostration as a rule attends the attack and appears in no way to be proportionate to the severity of the symptoms. In debilitated adults it proves a trying complication.

The Pneumonic process met with in Influenza is totally unlike that usually seen in non-influenzal states.

The onset of the symptoms here also is sudden. Pain in the side is more often absent than present. With the general body pains occurring at the time it is often absent or missed, and is in only a very few cases one of the signs to draw the attention to the state of the lungs. Even if Pneumonia is acquired early in the attack the process is ill-defined as a rule. One may "suspect" that an inflam-

matory action is going on but there is great difficulty often in detecting the site and nature of the same. On examination posteriorly in the region of the angle of the scapula I have detected a peculiar percussion note that has first caused me to suspect a deep-seated pneumonia, if associated with an elevated temperature. In the more clearly defined types of Pneumonia, however, the commonest site has been in the upper lobes and apices. To begin with it has nearly always been one-sided, but there is a tendency to spread to the opposite side, often after the crisis in one side has been reached. In some of the physical signs and symptoms the process is similar to the ordinary Croupous Pneumonia, but would appear to stop short of consolidation. I am of opinion that the exudation is seldom truly solid - more likely semi-fluid.

Mitchell-Bruce. (Brit. Med. Journ., Aug. 8th. '91.) has referred to this latter state of the exudation and expresses a similar opinion.

The cough here is troublesome, liable

to come on suddenly and continue in a paroxysmal manner.

The expectoration is seldom coloured - almost never rusty.

The crisis is generally sudden - and the recovery is frequently much more rapid than one is led to expect from the nature of the physical signs.

True delirium is not common, and has not proved such a bad omen as when occurring in the course of an ordinary pneumonia.

Broncho-Pneumonia in adults is an ill-defined process (in Influenza). Small areas of dulness with Bronchial breathing and occasional fine rales are detected in different parts of the lungs occasionally, after an attack of Bronchitis.

Spasmodic Asthma, in conjunction with irregularity of heart's action, has been noted in only a few cases.

In the Respiratory system also in Influenza certain conditions and physical signs are noticed that closely resemble some of the more serious morbid

conditions affecting that system more especially, for example, Phthisis. The outline of the following case will illustrate such a state.

T. H., age 46. Shipyard carpenter. A tall, thin, "Loosely put together" type of man of emaciated appearance. Temperate. Good family history. No trace of Phthisis in the family. Married - two healthy children.

First seen April 13th. 1893.

Patient stated that he had been under treatment by another doctor for about 7 weeks, with "Tar".

Confined to bed for about three weeks.

His illness began about 7 weeks ago "with a bad cold that settled on his chest". He had up to that time enjoyed excellent health.

Improvement was noted occasionally for about a week at a time but he always seemed to get a bad cold which threw him back again. He had gradually lost flesh and weight. Appetite had fallen off, and he was greatly troubled with

profuse sweating, more particularly in the early morning, 2 to 4 a.m. For the last three weeks he had been unable to be out of bed. "All his trouble was in his chest and his head."

Pains in calves of legs, arms, across the shoulders, in the eyes, forehead and temples.

Breathing difficult - feeling of tightness and weight over the upper part of the Thorax with raw pain behind the Sternum.

Cough troublesome, with profuse expectoration, Phlegm muco-purulent, yellowish-brown in colour, nummular at times.

On examination of the chest:-

Tendency to flatness of upper part of Thorax.

Expansion fair. Slight deficiency at apices and upper part.

Percussion revealed no distinct dulness.

Vocal fremitus not increased, or only to a very slight degree in the two upper inter-costal spaces and at right Apex.

Auscultation. Harsh, jerky breathing at apices.

Expiration prolonged on both sides at apex, with faint rales in same situation. Vocal resonance not appreciably increased.

Repeated examinations of sputum failed to reveal Tubercle Bacilli.

Alimentary system:- Tongue coated all over with a greyish-yellow fur.

Bowels relaxed considerably but irregularly.

Circulatory System:- Palpitation with pain occasionally. Dyspnoea.

Heart sounds weak, no valvular lesion,

Integumentary System.:- Malar flush. Cold clammy sweat, more particularly in early morning. Slight oedema of ankles and legs.

The sweating was a specially troublesome symptom and frequently kept the patient awake for a considerable time during the night. It yielded with the greatest difficulty and slowly to treatment.

Urinary System:- Sp. Gravity 1020. Acid. Trace albumen.

Temperature 101"F. Pulse 88. Respirations 26.

Treatment:- Rest in bed. Milk diet.
Liquid Peptonoids, Beef Tea, etc.,
Mixture:- Acetate of Potash., Vin. Ipecac., &
Ammon. Carb. Phenacetin grs VII every 4 hours.
Terebene - 4 or 5 drops on sugar 3 times a day.

Progress was extremely slow and irregular. In about 10 days the breathing became less difficult. Dyspnoea and weight in chest less. Raw pain in sternum less. Headache and limb pains less. Temperature varied from 101°F. to 103°F. Pulse more regular. Expansion more, force improved. Oedema of ankles passed off. Cough less troublesome, expectoration less, more viscid and whiter. Expansion of chest improved. Sweating less. Rest better - occasionally a tendency to waking up with a start - and dreaming. Appetite a little better and more regular.

May 2nd. Temperature normal. Dulness on percussion almost disappeared. No rales detected. Patient allowed out of bed for half an hour, to lie on a couch. Bowels, tendency to constipation.

May 20th. Patient out of doors for 20 minutes during the morning - felt very easily tired and giddy. Resting well at nights. Only occasionally sweating profusely.

Mixture:- Pot. Acetat., Tr. Nuc. Vomic.

June 2nd. Sent to Ilkley.

June 17th. Seen again after return.

Cough almost gone. No night sweats. Appetite good. Bowels regular. Can walk several miles without feeling tired.

Chest on examination:- No dulness - no pain - no rales.

Patient has gained in weight. P. 76. R. 20.

Patient returned to his work in the beginning of July, feeling well and strong. When I saw him about the end of July he expressed himself thus "You have made a new man of me" "I'm all right again". (tapping his chest.)

I have seen him occasionally and he still continues well. Has had no relapse.

For a time the case was doubtful as to diagnosis and ultimate result. The physical signs were extremely vague; but the ultimate result proves that the probabilities were greatly against Phthisis.

I am inclined to look upon it as an Influenzal state.

URINARY SYSTEM.

The state of the Urine in Influenza is by no means constant. During the earlier part of an attack there is polyuria. This is also noted as one of the symptoms that take place at the crisis. More often, however, the amount of urine excreted is diminished during the feverish stage, the specific gravity increased, occasionally a trace of albumen, frequently copious deposits of phosphates or urates.

Acute Nephritis was noted in one case, a young man, age 22, with no family history that would lead one to suspect the possibility of kidney disease. The symptoms appeared with the commencement of the fever, temperature ran up to 102"F. Urine scanty and

very high coloured, and muddy in appearance. Specific gravity 1022. Albumen a trace. Blood corpuscles and granular casts visible under the microscope. The urine remained of a dark smoky colour for 4 or 5 days, but by the end of the 8th day from the commencement of the attack all trace of albumen and blood had disappeared. Repeated examinations since of urine have failed to trace any albumen, and the patient is now apparently perfectly well.

A transient haematuria or albuminuria appears as an occasional symptom.

Cystitis of a very mild and shortlived type has been seen occasionally, but the condition has invariably subsided with the subsidence of feverish symptoms. Unless there has been some previous mischief in some part of the urinary tract it would appear to be rare to get much in the way of sequelae after Influenzal attack in that system.

INTEGUMENTARY SYSTEM.

The sensations of heat, chilliness, cold,

clammy perspiration, have already been noted.

With Influenza one meets with rashes that closely resemble the rashes of Scarlet Fever, Measles, etc., etc.

The most frequent, in my experience, has been the Scarlitiniform rash. It differs from the rash of true Scarlet however in several ways, for example:-

It appears on all parts of the body (that is that show a rash) simultaneously, and with uniform distinctness, the temperature in such cases is rarely over 100"F. or 101"F. and sore throat and albuminuria are rare in conjunction with such a rash. Desquamation may occur but is usually limited in extent. Rashes of the nature of Erythema, Erysipelas, etc., have also been noted. One form of rash I have noted in Influenza appears to be more or less common after slight abrasions of the skin. It corresponds very much to the Vesicular Eruption referred to as occurringon the palate.

The following short history of a case will illustrate the kind of affection:-

Capt. R., while coming ashore from his vessel on Feb. 21st.,1895, knocked his shin against some props that were lying about. He felt little or no pain at the time and his attention had not been attracted to the injury till, being seized with an attack of Influenza on the 24th ((during the night he awoke, feeling pained all over, shivering, etc.) . On the 25th. he felt a sharp pricking pain all along the front of his shin. On examination it was found that there was a general glazed appearance for about 7 in. in length along the anterior aspect of the leg over the Tibia. No great swelling was noticed and, as there was no specific or gouty tendency in the family history, it was thought that rest in bed, etc., would be all that was needed. Next morning, however, numerous little vesicles, whitish in colour, and rather less than a split pea, were studded all over the red surface. They contained a glairy, viscid fluid, small in amount, but this fluid appeared to have quite an irritating effect on the surface around. They tended

to grow in crops, one lot disappearing as another appeared - were painful to the touch. Ultimately desquamation of the skin (it appeared only the outer layer of the epithelium) over the area affected set in and a painful, slow healing, tending to crack, surface remained.

In another case, that of a railway engine-driver, who had the middle finger of his right hand crushed off at the first phalanged joint, similar dermatitis occurred after the wound was well healed following on an attack of Influenza. In this case, however, it became general all over the body, face, neck, legs, and all partaking in the eruption, and desquamation was free.

As regards the treatment, I have obtained best results by the application, 3 or 4 times a day, of equal parts of Distilled Liquid Extract of Hamamelis Virginica and Glycerine. If painful for the first few applications, hot water may be added with advantage.

Any form of dusting powder appears only

to increase the tendency to desquamation by covering up the raw surface and making a gummy mass with the excretion from the vesicles. Hazeline alone is too styptic and is apt to produce a surface that shows a great tendency to crack afterwards.

I have never seen this condition of "Vesicular Dermatitis" in any other relationship, that is, in Non-Influenzal states.

REPRODUCTIVE SYSTEM.

In the male reproductive system no special phenomena have been observed as occurring during an Influenzal attack. In the female, however, there are numerous complications.

In young women in whom menstruation has been established great irregularity of occurrence has been noticed. There is a great tendency, on the one hand, to an early occurrence of the menses, and on the other to a delay in the return of the usual period, even in patients who have previously menstruated. quite regularly.

In one case under my care, a young girl, age 18, anaemic, with very scanty menstruation, yet fairly regular, contracted Influenza. Two days after the initial symptoms were noticed, troublesome and excessive menorrhagia set in and lasted for 3 days. She had only got over her former period about 2 or 3 days before the Influenza set in.

In a young multipara, age 29, Influenza supervened on the 5th day after her confinement and was attended by alarming uterine haemorrhage. Previously, at her confinement and after, the loss had not been excessive. I was sent for in a hurry and found the patient lying on her back in bed - the bedding and mattresses soaked with blood. The patient was blanched, cold, breathing shallow, pulse imperceptible at the wrist. Patient unconscious. The uterus was grasped firmly through the abdominal walls and hot water intra-uterine injections given at once. A rectal injection of saline solution was also given. The pulse gradually rallied, patient's breathing became less shallow and she regained consciousness.

The history of the onset was, a shivering

dreadful pain in the forehead and temples, legs and arms. From the mode of onset, the symptoms and after progress of the case I have no hesitation in deciding that it was an Influenzal attack complicated by a somewhat alarming symptom.

In another case, a multipara, age 36, Influenzal symptoms set in on the morning of the third day after she had stopped from her last period and on the second day of the attack a copious uterine haemorrhage occurred and lasted for about 5 days.

In such cases the uterus is enlarged, soft, and spongy to the touch. A considerable time elapses after such attacks before the uterine tone is regained.

Abortion has been noticed in a few cases during or with an attack of Influenza.

Should the patient be suffering from Influenza at the time labour sets in, I am inclined, from what I have seen, to believe that the pains are increased in severity but diminished in usefulness and that labour is prolonged even in multipara who have previously had quick labours.

The liability of Influenza to follow after a confinement is a point which either has not been sufficiently investigated or, if recognised, has not had the amount of emphasis placed upon it to which it is due.

It would be going too far to say that Parturition was one of the pre-disposing causes of Influenza - but undoubtedly there is a relationship between the two conditions, that is fairly constant and definite.

I would seek to explain the occurrence of such post-partum attacks by saying that the confinement produced a certain amount of shock in the system., or, in other words, lowered the vitality of the system, so that Influenza was enabled to enter the body and find a suitable nidus, or, if already present in the body, was allowed scope for development. We shall see later that Influenza bears a similar relation to accidents in general so the above explanation will to a certain extent be strengthened by the mention of both occurrences.

A further point in reference to post-partum Influenza is the time at which the attack first makes ita appearance after the confinement.

From a series of careful observations in a number of cases I have been enabled to distinguish two periods at which Influenza is likely to supervene, according as to whether the patient has, or has not, had Influenza before the confinement. Here a difficulty would naturally present itself to many, viz:- "How are we to determine if a patient has had Influenza previously or not?" The symptoms are, however, usually so distinct that there is little likelihood of their escaping the patient's memory or recollection. In the cases to be quoted none are included unless a previous attack was not definitely known, (many in fact were seen by myself) and likewise none are included in the other group to be mentioned when there was a doubt as to a previous attack. Indefinite, or extremely mild attacks are not included, nor are cases when there was doubt between Influenza and some of the other puerperal states, e.g. Septicaemia.

In patients then who have had Influenza previous to their confinement, if they contract Influenza after their confinement, such attack, in the vast majority of cases, is first evidenced by one or other of its initial symptoms two and a half days after the time of their confinement.

On the other hand in patients who have not had Influenza previous to their confinement, if they contract Influenza after their confinement, the initial symptoms are almost invariably to be noted as occurring five days after the time of their confinement.

I now quote from a series of 47 cases illustrating the first group, i.e., those who had a previous Influenzal attack.

It will be sufficient, however, for purposes of illustration to mention only a few from each group - with the main features of attack.

Mrs. W. Partus November 8th., '92 11.15 a.m.
Second child. Easy natural labour.
Nov. 9th. When seen at 12 noon, had passed a

fairly good night. A few after pains, but severity diminishing. Lochia free. Feeling generally comfortable. P. 96. T. Normal. Uterus well contracted. Water passed freely, etc.

Nov. 10th. nearly 12 midnight - urgent message. sent "Mrs W. took worse about half an hour ago, shivering from head to foot."

I went at once and found patient having cold shivers. Vomiting. Pain in eyes, forehead, and down the back of neck. Temp. 102"F. Pulse 99, weak and soft, regular. Bowels moved during the afternoon. Uterus fairly well contracted.

Ordered:- Hot Flannels. Warm Milk. Mixture of Acetate of Potash. Tinct. Aconite.

Phenacetin grains VII every four hours.

Nov. 11th. About 10.30 a.m. Restless night, talking in her sleep - the latter only at short intervals. Pains in legs, arms, back of neck worse. Vomiting abated. Urine high coloured and scanty. No appetite. Headache less. Discharge, no bad odour, no clots, quantity slightly

increased. Had one slight shiver during the morning. Tongue, slight yellow fur all over. Pulse 104. Temp. 102 7"F.

Nov. 12th. Patient has had a better night. No talking in sleep. Headache and pains in eyes back, and limbs less. Still tendency to shivering. Slight dry cough. Milk supply practically unaltered. Baby taking breast well. P. 96. T. 100 2"F. Urine passed more freely, not so high in colour. Lochia free, no clots, no bad odour. Bowels again moved. Uterus less firmly contracted than yesterday, larger and more spongy to the touch.

Nov. 13th. Had 2 hours sleep at a time. Comparatively free from pain except at back of neck and in calves of legs. Tongue clearing, red at tip, sides and up the centre, on each side of middle line. Milk supply unaltered. No pain in breasts except when baby sucked. Lochia less in quantity, colour also less, no bad odour. P. 90. T. 99 2. Allowed Beef Tea, mutton broth, etc.

Nov. 14th. Patient has had a good night. Almost no pain. General feeling of stiffness and languor. Appetite improving. Milk supply plentiful. Bowels moved freely. P. 76. T. Normal.

Mixture:- Acetate of Potash and Nuc. Vomic. Phenacetin powder at bed-time if headache troubles. Small mutton chop or chicken allowed.

From now the patient gradually improved.

Allowed out of bed on 21st. for 20 minutes, to lie on a couch.

Patient felt rather depressed, giddy and faint when moving about.

On the 28th in the early morning there was a slight rigor, with return of headache, limb pains, etc., in a less degree than last attack, but undoubtedly a relapse. Kept in bed for 4 days and allowed up for a little time each afternoon after.

From now the recovery was gradual and uneventful.

On March 25th. 1894 patient was again

confined. Labour was more lingering but required no instrumental assistance. All went well till the morning of March 28th when I found a rise of Temperature accompanied by Influenzal symptoms of a milder type than before. On this occasion also an entire absence of odour suggestive of Septicaemia in Lochia was noted and there was no interference with the milk supply.

On Nov. 17th. 1895 patient was again confined. With the exception, however, of a slight transient headache and loss of appetite, accompanied by a general feeling of lassitude there were no definite symptoms of Influenza. The milk supply was well established in each instance early, and hence symptoms could not be referable to so-called "Milk Fever". No relief was noted in symptoms even when the child was sucking freely.

Mrs. S. Confined of her second child. Forceps delivery, on Feb. 10th. '93 at 3 a.m.
After the placenta was expelled the uterus was found fairly contracted, there had been little haemorrhage. Pulse 82. T. 99.
Seen again 10.30 a.m. After pains severe. One medium sized clot passed. Water passed freely. Patient expressed herself comfortable, all except for the after-pains. Pulse 76. T. Normal.
In this case milk was pouring from the breasts before delivery. Patient had Liq. Morph. Acet. mim. XV. for after pains at bed-time if necessary. Aperient to be taken at bed-time.
Feb. 11th. Seen about 11 a.m. Patient has had a splendid night. As after pains were not troublesome the draught was not taken. Bowels acted during the morning. Water passed freely.
Lochia free, but not so high-coloured as yesterday - no bad odour - no more clots passed.
Tongue clean. Child taking breast well. Pulse 72. Temp. Normal. Allowed a small piece of fish.

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Feb. 12th. Again had a good night. Patient expressed herself as desirous of "having a little more to eat." Bowels moved again. Lochia same as yesterday practically. Temp. Normal.

Feb. 13th. Patient not so well. "Fell off" yesterday afternoon about 4 o'clock. Had no friends in to see her and did nothing that could be looked upon as the cause of her feeling worse. About 4 p.m. yesterday had a feeling of "cold water running down her back," and shivering, but occasionally felt burning all over "like a fire." Headache, pains at back of neck, across the shoulders, down the arms, in the legs, with a feeling of numbness in the toes. Tendency to sickness. No desire for food of any kind. Throat dry and sore on swallowing. Patient has had a restless sleepless night. The baby now fretful and restless, up till now has taken breast well and slept the greater part of the night. Baby's bowels relaxed. Motions greenish. Tongue furred. Running at nose and eyes and

sneezing. Patient has been having "burning heats and shiverings" all the morning. Headache now intense, and scarcely able to keep eyes open for the pain. Temp. 102"F. Pulse 97.

Lochia darkened in colour and more in quantity than yesterday - no clots. Water scanty and high coloured. Tongue - slight whitish fur, except at tip where it was almost clean - papillae at tip well marked. Milk supply appeared to be unaltered, no pain in the breasts. Small white patches on each tonsil, both tonsils inflamed and swollen. Occasional hard, dry cough, no phlegm.

Ordered:- Gruel, milk, etc.

Mixture:- Acetate of Potash. Tinct. Aconite.

Powder:- Phenac. grains VII every four hours.

Feb. 14th. Patient perspired freely during yesterday afternoon and evening. Pains in limbs less acute; but feeling of bruising all over the limbs and in back of neck. Less burning and shivering. Little sleep during night, yet patient felt drowsy and quiet. Headache still

troublesome. Earache on right side. Throat not so sore to swallow. Patches clearing from tonsils. Eyes not feeling so heavy. Temp. 101°F. Pulse 92 - soft - regular. Lochia still free - but still high coloured and muddy. Sickness less. Cough still troublesome. With the exception of a pain over and behind the sternum the chest showed no abnormal signs on examination. To continue medicine and powder. Barley water to drink. Warm glycerine and hot flannel for earache.

Feb. 15th. Patient feeling a little better. Dull bruised feeling in the limbs still present. Throat improved - patches almost cleared - no pain on swallowing fluids. Bowels moved at bedtime last night. Tongue clearing. Sickness absent. Still no desire for food.

Baby was given Pulv. Pepsinae Co. Had less fretful night. Bowels still relaxed. Motions still green. Taking breast better again. Milk supply was not quite so free during yesterday afternoon and this morning. Lochia still coloured. Water passed more freely. Pulse 87. T. 99 2.

Exalgine gr. 1½ for earache.

Feb. 16th. Patient slept from 11 p.m. till 2.30. a.m. when she was awakened by baby. Little or only occasional pains in head. No shivering. Pain in back less. Appetite a little better. Throat less inflamed - no patches. Cough still troublesome, but pains less at sternum. Pulse 79. T. 99.

Mixture:- Acetate of Potash, Nuc. Nov.

Phenacetin - at bed time.

The temperature fell to normal on Feb. 18th and, with the exception of one afternoon when it rose to 99 8"F.- after the patient had had some friends to see her -, remained so. Her appetite was slow of improvement. Occasional headache at bed-time. Swimming feeling in head if raised from pillow for long at a time. Earache slowly improved. Lochia diminished in colour and quantity. Milk supply improved on and after the 17th. Patient was allowed to sit up out of bed by Feb. 25th., and by March 5th. was able to sit up all

the afternoon without any headache or restless night following. Still feeling shaky and giddy on moving about. Appetite was now good. Milk supply constant. Baby improved generally. There was a tendency to deafness left in the mother after the earache but was relieved by treatment with Politzer's Method of Inflation.

It is interesting to note that patient recognised the symptoms at the onset of the attack as similar to those she had after her previous confinement in 1892, when attended by another medical man, who told her she had Influenza.

Mrs S. Had another severe attack of Influenza in November 1894 - accompanied by a sharp attack of Bronchitis. She had one relapse on the 17th day after the onset of the initial symptoms and a second at the end of five weeks from the first onset. Thus she serves to illustrate, what will be mentioned afterwards, viz., the great tendency to a relapse occurring on the 17th day of the attack - or after the onset of the initial symptoms.

Both patients serve as good examples, in many respects typical, of the disease. Both had Influenza previous to the confinement; both had the commencement of the symptoms at the end of two and a half days after the time of confinement. The other 45 cases had general symptoms very much alike and similar to the histories quoted. In one only was there a distinct change in the lochia that would cause one to suspect a commencing septicaemia, but the onset was too sudden and the duration too short for septicaemia. The effect on the milk supply was extremely slight, never permanently diminished and usually only for a few days at the most.

We shall now consider the second type of Post-partum Influenza, viz., that occurring in patients who have not previously had the disease and in whom the initial symptoms appeared at 5 days from the time of confinement.

Mrs R. age 34 - confined Sept. 10th. 1893.

No previous Influenzal attack - Easy natural labour

6.30.p.m. Placenta expelled naturally. After contractions of uterus good. Pulse 82.

Seen again Sept. 11th., about 11.a.m. After-pains troublesome, not abating. Lochia free - a few small clots passed early this morning. Water freely passed. Breasts painful, a little milk in one breast. Temp. 99. Pulse 84. Diet:- Gruel, milk, weak tea, and milk with a little toast.

Sept. 12th. After pains have been comparatively easy since yesterday and only occasionally troublesome this morning. Milk appearing in both breasts. Baby applied to breasts. Bowels moved, with dose of Castor Oil, this morning. Lochia free, no clots, no bad odour. Temp 98 8. Pulse 76. Patient allowed a little fish, a chicken breast or small lightly cooked mutton chop for dinner.

Sept. 13th. Patient expressed herself as feeling "comfortable" in every way. Good night's rest. Baby taking breast well. Milk supply plentiful.

Lochia diminishing slightly in amount.

Sept. 14th. Doing well.

Sept. 15th. Satisfactory in every way, bowels moved again naturally. Milk supply good. Child taking breast well.

Sept. 16th. Patient not so well this morning. On enquiring found that, although she had a splendid and quiet day yesterday, no one except the nurse and husband having seen her, nothing in diet except what was ordered, there was a falling off in the evening. She did not feel so well when her husband came home from work and commenced to "feel burning" and "dead sick" about 7-8 o'clock. During the night she had several rigors, more often, however, a feeling of "burning all over" except in the "spine of her back where she felt icy cold". Headache, pain in temples, back of neck, small of back, arms and legs. Sickness and vomiting. Diarrhoea. Sore throat, etc. Temp. 101 6. Pulse 100 - 104. Tongue - light coloured fur generally all over - red and promin-

ent papillae showing through the fur at the tip.
Fauces reddened. Tonsils swollen.
On examination of chest no abnormal physical signs.
Cold, clammy sweat, standing in beads on forehead.
No appetite, restless.
Mixture:- Acetate of Potash, Bromide of Potash, Tinct. of Aconite.
Powder. Phenacetin, every 6 hours.
Sept. 17th. Patient feels very poorly and depressed. Had an exceedingly restless night. The moment the eyes were closed she was "all over the place, doing and seeing all sorts of things." Accompanying these latter sensations there was a feeling of reeling or swimming, and this morning feels so overcome that she is "almost like to sink through the bed." Lochia has again become very green and high coloured. Sp. Gravity 1020. Acid. No albumen. Phosphates in abundance. Diarrhoea stopped. Perspiration free. Less tendency to shivering. Pain over breast-bone. Hard, hacking, dry cough, almost no phlegm . Pain in back and legs a little easier.

Headache and giddiness still troublesome. Milk supply still free. Child taking breast well. Pulse 83. Temp. 100 2. Ordered dry, hot flannels, repeated frequently, for the headache and pains at the back of neck.

Sept. 18th. Had a somewhat better night. Not so much wandering. Shivering only slightly at intervals. Perspiration very free. Pains in back and legs easier. Headache easier during day yesterday, but recurred again in the evening. Considerable relief from very hot flannels but only temporary. Vomiting and sickness stopped. Water still high coloured but passed more freely. Pulse 85. Temp. 99"F. Tongue clearing.

Sept. 19th. Patient slept well from 10 a.m. till about 2 or 3 a.m.; but since then sleep has only been obtained for short intervals. Patient less depressed. Free from pain. Cough troublesome. Appetite a trifle improved, able to have a little Bovril and Beef-tea. Child rather restless, but taking breast very well. No appreciable diminution in milk supply. Temp. Normal. Pulse 79.

Mixture:- Acetate of Potash., Tinct.Card.Co., and Tinct.Nuc.Vomic.

Powder. Phenacetin, night and morning.

Mutton Broth, Bovril, Bovril and Gruel combined.

Sept. 20th. Patient has had a fair night, no restless, but little satisfactory sleep. Bowels moved early this morning. Water passed freely - Sp. Gr. 1016. Acid. No albumen. Phosphates a trace. Tongue, - red at sides, tip, and up the centre, at other parts a thin greyish fur. Cough abating. Throat almost well. Temp. 99. Pulse 74. Diet, etc., as yesterday.

Sept. 21st. Patient better. Better night's rest. Appetite improving, more desire for food. Bowels moved last night. Temp. Normal. Pulse 76 - much fuller and stronger. Breathing free. Cough only troublesome at bed-time. Little or no headache.

From now till Sept 28th patient improved slowly. On that date in the afternoon she was allowed out of bed for half an hour but was very

tired and glad to get back to bed after about 15 minutes sitting up. Slight headache in evening after, relieved by a Phenacetin powder. A splendid night's rest. Baby doing well.

From now there was nothing eventful in the progress or history of the case.

Mrs. P., delivered of her second child on Dec. 6th. 1893, at 10.5 p.m. Labour was natural and quick. Slight anaesthesia employed. After contractions of uterus satisfactory. Not much haemorrhage. She had no previous history of Influenza - in fact had enjoyed splendid health.

Dec. 7th. Seen about 10.30 a.m. After pains have not troubled much. Lochia not excessive. one moderate sized clot passed this morning. Water passed last night, about 12 midnight. Patient expressed herself as feeling "beautiful". Temp. Normal. Pulse 77 per minute.
Baby quiet during the night - bowels acted.
Gruel, etc., allowed to patient.

Dec. 8th. Since seen yesterday patient has pro-

gressed satisfactorily in every way. Milk in small quantity in breasts. Child sucking well. Temperature normal.

Dec. 9th. Bowels moved in morning with aperient draught at bed-time. Temp. Normal. Mother and child doing well. Milk supply improved.

Dec. 10th. Mother and child have passed a good night. Patient's appetite good - still to continue gruel. Temperature, normal.

Dec. 11th. Both doing well. Temp. Normal,etc.,

Dec. 12th. Patient feverish, restless, shivering, "pained all over", vomiting. Frontal headache and pain in eyes severe. Has passed a restless, almost sleepless night. During yesterday patient was kept perfectly quiet and had no article of food that could possibly account for he uneasiness, etc. During yesterday afternoon patient remarked to her nurse how well she felt in every way. She went to sleep between 9 and 10 o'clock, waking up at 11 p.m.with a start and feeling shivering and sick.

Lochia again increased in quantity, high coloured,

no foul odour. No uterine or pelvic pains or uneasiness. Uterus flabby and badly contracted. Water scanty and high coloured. Sp.Gr. 1019. No albumen. Tongue furred, fauces inflamed. Temperature 103 1. Pulse 100.

Lungs on examination showed no abnormal physical signs. No abdominal pains or tenderness. No pelvic tenderness on pressure. Bowels relaxed this morning. No desire for food of any description. Great thirst. Skin hot and burning, no perspiration.

Mixture:- Acetate of Potash. Bromide of Potash.

Powder:- Phenacetin, grains VII every 4 hours.

Dry hot flannels for head, etc.

Diet:- Milk and barley water or soda water.

Seen again in evening. Sickness a little better. Headache not greatly improved. Difficulty and pain on swallowing. Tonsils slightly enlarged and covered with a glairy mucus. Temp. 102 7. P. 96. No pelvic symptoms or physical signs. Milk supply practically unaltered. Breasts comfortable. Perspiration now free, but clammy.

Alternate "flushings and shivers".

Patient somewhat less restless.

Dec. 13th. Patient has passed a very moderate night. Little snatches of sleep at intervals. Now feels exhausted and drowsy. Pains generally relieved. Cough still hard and troublesome - no phlegm. Tongue furred - clearing at sides anteriorly. Bowels moved during the night. Fauces and tonsils less inflamed. Water passed a little more freely. Temperature 101.1. Pulse 89.

Dec. 14th. Patient has had a more peaceful night, but feels dead tired this morning. Limbs still sore. Occasiónal headache. Throat feeling more comfortable - less inflamed. Bowels moved this morning. Water passed in good quantity but still high coloured. Sickness abated. No appetite. Tongue clearing at sides, tip, and up the centre, over anterior half. Temperature 99.6. Pulse 82. Perspiration free. Child doing well.

Dec. 16th. Temperature fell to normal and remained, with only a slight fluctuation, never

more than one degree, so. Appetite improved rapidly. Bowels acted freely daily. Sleep better, but broken - great tendency to dreaming during sleep. Patient was allowed out of bed for the first time on Dec. 23rd.

Recovery after that was slow but uninterrupted.

Mrs. J., confined of her second child on Feb. 28th. 1896 at 4 p.m. No previous Influenzal history - in fact, patient was extremely sceptical about the existence of such a complaint. Progress wa satisfactory till the 4th of March. On that date when her husband returned from work he was surprised to find his wife vomiting, shivering, etc., about 5.15. p.m. She had a very typical attack of Influenza, the feverish stage lasting 3-4 days. No complications. Recovery and progress generally uneventful.

Patient had the usual Acetate of Potash mixture and Phenacetin Powder.

Allowed out of bed on March 17th.

Not only was the attack typical from a medical point of view, but it sufficed to put aside all

doubts and scruples on the patient's part as to the existence of Influenza.

In addition to the symptoms, etc. , mentioned already under this system, it has been noted that, in patients who seem to suffer from what I would term "Chronic Influenza", there is a remarkable tendency in many instances to the recurrence of the menses every 3 weeks - and such menstruation is as a general rule somewhat profuse.

NERVOUS SYSTEM.

In a paper such as this it would be almost an impossibility to deal at all fully with all the many phenomena of a nervous description that have been noted during the Influenza epidemics of the last few years. Some have already been mentioned. To recapitulate rapidly one might merely allude to a few - for example :-

Neuralgias, Prostration, Irritability.

Dreams, Melancholias, altered states of function of spinal centres, etc., as evidenced by

failure of memory, loss of power of concentration, and also dificiency, in many instances, of power of expression of ideas, etc., etc.

Hysteria, Hystero-epilepsy has been noted in Influenzal attack, more especially in the cases where the convalescence is slow. In addition, where there were pre-existing nervous affections, such were always aggravated by the supervention of Influenza.

Melancholia, with a suicidal tendency was well marked in one case.

EFFECT ON THE EYES.

The most general and common affections that have been seen in the eyes have been of a similar nature to what one finds in debilitated states generally. All have proved amenable to treatment, general and local, some however extremely slowly.

A spasmodic twitching of upper eyelid has occurred in several cases, but the condition disappeared with the improvement of the case generally.

Conjunctivitis is apt to occur at an early stage in the attack. In addition to the general treatment, local application of Distilled Liquid Extract of Hamamelis Virginica has produced good results.

Asthenopia has been quite a common symptom. Any attempt at reading, sewing, writing, etc., more especially by artificial light, tends to aggravate the condition greatly. Nothing would appear to be more important than the total abstinence during, and as long after an Influenzal attack as possible, from all such occupations.

In school children more especially has impairment of vision, frequently with marked asthenopia, been seen. It is highly important in such cases, in addition to the general attention to the dietary etc., to keep the children so affected away from school till a decided improvement is noted and on no account to permit them to do work involving the use of the eyes by artificial light, e.g., home lessons, for several months after the asthenopia

has passed off and the vision is apparently well. Such defects are extremely liable to be brought on again by a too quick return to full work.

Where Influenza attacks patients after middle life, who have had previous defects of sight, there is a tendency to the hastening and increasing of such defects.

Visual defects would appear to be quite as common after the more moderate attacks of Influenza as after the more acute and severe and even prolonged attacks.

Iritis and Optic Neuritis are not apparently specially common complications of Influenza.

EFFECTS ON THE EARS.

A temporary impairment of hearing is not at all uncommon with Influenza and generally lasts long after the convalescence is well established. A catarrhal state of the Eustachian tube accounts no doubt for the great majority of defects of hearing following or accompanying the Pharyngitis and

so frequently seen.

Tinnitus and pain are sometimes troublesome and severe but as a general rule only during the feverish stage in the majority of cases.

Otitis Media - of a catarrhal nature - has also been seen in a few cases.

True Nerve Deafness during or after Influenza has not been seen in the cases under my notice to be anything but a temporary affection.

TASTE AND SMELL.

Taste and smell have been impaired for a time in several cases of Influenza. The ability to taste salt has not been noted to be absent or impaired in any of the cases examined. It would appear that the defect lay more in the affection of the taste of sugar and other sweet substances. So also with the sense of smell. In no case has the patient failed to smell Ammonia, frequently pungent odours have not been perceived at all however, e.g., Assafoetida, etc.

R E L A P S E S.

The subject of Relapse in relation to Influenza is one of great interest, not so much because of the tendency to relapse being great, but more as to the time of occurrence of the relapse. There must be few practitioners indeed who, at one time or another in their experience, have not come across cases where a relapse took place. Many such relapses are due in a great extent to the want of caution on the part of the patient and the medical attendant. The patient is often extremely anxious to return to his or her occupation or business and prevails on the medical attendant by excuses, often numerous and important, to grant permission for such return to work even where it is a matter of doubt as to what may be the consequences of such a decision.

In a certain proportion of cases then, one might say that relapses were avoidable, in others, however, even where every care has been taken, a relapse may occur. Such relapses one might describe as unavoidable.

In dealing with the subject of relapses my opinions have been formed after the study more particularly of the cases where the relapse would appear to have been unavoidable. The primary attack we recognise as variable in severity, so also we must look upon the relapse as varying in severity. It must be a fairly common occurrence in the experience of every practitioner to have patients coming for advice because they are at a loss to know exactly what ails them. They frequently mention that there is nothing much the matter, but that they don't feel so energetic and active as formerly.

On careful enquiry into the history of such patients it is frequently possible to gather that they had a "cold" which passed off with little or no treatment. On still more careful enquiry however, it is sometimes possible to fix the exact date of such "colds that passed off" (as they think). I have endeavoured (and with a fair measure of success in many instances) to ascertain the exact dates of such "colds". Occasionally the patient volounteers the statement "I had a bad cold a little over a

fortnight ago", or "I had a bad cold about a fortnight or 3 weeks ago, being in the house for one or more days; but I got all right again without sending for advice."

Such cases give one a general, though perhaps somewhat indefinite clue to the situation. One can follow out the train of reasoning more accurately in cases under observation when the relapse occurs.

Teaching, traditional in many instances, has led us to look upon the "ninth day" after a confinement as an important date. Investigation, pathological and clinical, has to a great extent confirmed such teaching, though it is still looked upon by some as "mere superstition". In Typhoid Fever, Pneumonia, Malarial Fever, etc., we recognise "periods" critical and otherwise. So also one, to a great extent, can recognise "periods" in Influenza.

I do not wish to refer such relapses as occur without a period of comparative convalescence or good health intervening. Such relapses may undoubtedly occur at any period in the course of the attack.

EXAMPLES OF RELAPSES.

One or two of the cases already quoted illustrate the point in question.

For example:- If we refer to the case of Mrs. W., confined Nov. 8th. 1892. Influenzal attack came on Nov. 10th - 11th. We note a "slight rigor, with return of the headache, etc.," on Nov. 28th., that is 17 days from the date of onset of first attack.

Case S. S., age 44, by occupation a church verger, gardiner, etc. He was suddenly seized with an attack of vomiting, diarrhoea, etc., with shivering, on the morning of Feb. 7th. 1894. By mid-day there was no doubt as to the diagnosis of Influenza. He was ordered to bed for two days, etc. Allowed downstairs on Feb. 13th. and by the 18th Feb. he was to all intents and purposes well, but was advised not to return to work for at least a week. This advice was followed carefully.

On Feb. 24th. - Wednesday - we were again asked to visit the man as he had been "seized" again that

morning. On examination we found him again suffering from a fresh attack of his influenzal symptoms. Temp. 102 3. The same treatment was ordered as on Feb. 7th. After getting downstairs again he was advised to go for a change of air, which he did.

On November 10th. 1895, I again saw him in an attack of Influenza - this time rather more acute than the last. He was confined to his bed-room for 6 days, and to the house for nearly three weeks.

This time, however, I had not the opportunity of seeing a relapse on the 17th day as the patient remained in bed from the 16th to the 18th day inclusive to "prevent a relapse" he said.

Case C. M., age 31, an accountant, came to consult me on Feb. 4th. 1895, because of a "shivery feeling all over, no appetite, headache, pains in limbs, back, etc., " His pulse was slow, 62 per minute, regular but soft, Diagnosis of Influenza was made. He was advised to remain in the house

for a few days and was given mixture of Acetate of Potash, Tr. Nuc. Vom. and Infus. Calumb. Phenacetin Powder at bed-time.

On the sixth of Feb. saw him again. Slight improvement. By the 11th of Feb. he reported that he felt well again, free from pain, appetite improving. He was warned not to over-exert himself and to keep as warm as possible.

I heard nothing further from him till Feb. 22nd., when he complained that he had been ill all the previous day and quite upset for work. No appetite. Shivering. Pains in limbs and back. Sore throat, etc. He was ordered to remain in bed for 2 or 3 days and the same treatment again adopted. He passed through a very typical attack of Influenza and returned to work on March 18th. For about a month after that date he suffered from giddiness, occasional headache, more especially in the evening.

Since November 1892 I have noted the dates of Influenzal attacks in different individuals and

the dates at which relapses occurred. In 32 examples of distinct Influenzal attacks, where relapses occurred after a period of apparent convalescence and without the intervention of a distinct cause to account for a relapse, such relapses occurred in 27 cases on the 17th day from the date of onset, 3 occurred on the 18th day and one on the 16th day.

In recording the 32 cases illustrating relapses I have been careful to select only such as definitely and distinctly showed not only the primary attack, but also the secondary or relapse.

INFLUENZA AFTER ACCIDENTS.

While an epidemic of Influenza is prevalent it is quite a common thing to have an attack following after an accident even if such accident is only slight. I have had the opportunity of watching the relationship of the two in some of the employees of the North Eastern Railway and would now quote a few cases as examples. It would be superfluous to do more than indicate the mere outline of the cases.

Case A. W., a shunter. While following his usual employment on Dec. 8th. 1893 at 10.30. a.m. (or thereabouts) slipped and sprained his ankle. He was seen at 11 o'clock the same morning when the foot ankle and leg were put up under pressure with cotton wool. He was ordered to rest the foot up on a couch quietly. There was not much swelling when the foot, etc., were dressed. No other injuries.

Dec. 9th. Pressure re-applied. Ecchymosis all round ankle and extending on to dorsum of foot.

Dec. 10th. Seen again about 11 a.m. Foot had been comfortable during the night. The dressings re-applied. Swelling less.

Dec. 11th. Patient extremely restless, feverish. Has passed a bad restless night. He was quite well, comparatively, during yesterday afternoon and evening, but "fell off" at bed-time. He had sickness and diarrhoea. Now he is pained in head, limbs and back. Feeling of flushing alternating with cold. Tendency to small perspiration.

Throat dry and sore on swallowing. Temperature 102 5. Pulse 89 - soft but regular. Tongue - light coloured fur all over in samll amount. Fauces reddened and inflamed. Lungs normal on percussion and auscultation. Ordered to keep in bed for 2 days. Liquid diet, milk, etc. Mixture:- Acetate of Potash. Tr. Aconite. Phenacetin powder every 6 hours.

The ankle was more painful during the night and morning than it had been formerly. No more swelling. Dressing re-applied.

Dec. 12th. Patient still pained in forehead, back of neck, legs, arms, etc. Throat sore to swallow. Diarrhoea abated. Perspiration free. Temp. 102 1. Pulse 82. Restless dreaming night. Tongue clearing. Swelling of ankle going down. Ordered hot fomentations and gentle massage for same.

Dec. 13th. Patient in less pain. Greatly depressed. Sinking feeling frequently comes over him. No desire for food. Bowels acted this morning. Water somewhat high coloured and scanty.

Dec. 14th. Temp. 99 2. Pulse 79.

Rest and sleep more satisfactory. Appetite a trifle improved. Tongue clearing. Bowels moved yesterday afternoon - not since.

Mixture:- Acetate of Potash, Tr,Nuc.Vomic., and Infus. Calumb.

Phenacetin Powder night and morning.

Ankle doing well.

On Dec. 16th. the temperature fell to normal , the patient was greatly depressed and had little or no appetite.

Allowed out of bed on 18th. Dec.

By the 21st. he was allowed to use the ankle with the help of a stick.

He progressed in general convalescence slowly and returned to light duty in March - first week.

Case M. J. , platelayer. Sprained his wrist on Nov. 28th. 1894, while unloading railway sleepers from a waggon about four in the afternoon. The wrist was strapped with strong adhesive plasters and the man was ordered to give it

two or three days rest. However he kept on at his usual work.

On Dec. 1st. he came to the Surgery complaining of "feeling bad all over", pains in back, limbs, severe frontal and occipital headache, furred tongue, He was confined to the house for 5 days with a mild attack of Influenza. In this case it was impossible to ascertain exactly when the initial symptoms set in, but on the morning of Dec. 1st. he felt giddy and sick with a tendency to shivering on getting out of bed. He ate almost no breakfast and set off for work, but only managed to continue for about one hour. The Influenzal attack was mild but fairly distinct. The progress of the sprained wrist was slow but steady. The treatment while in the house was, rest, warmth, and Acetate of Potash Mixture. The temperature on Dec. 1st. was 99 5, on Dec. 2nd. 100 2, but fell on Dec. 3rd. to normal.

Case J. F., a goods guard - on Nov. 28th.'95 slipped while running to uncouple some waggons and sprained his right ankle about 2 o'clock in the afternoon. He was seen almost immediately after the accident and pressure with cotton wool and bandage was applied to the foot and ankle. Afterwards he was sent home and ordered to rest in bed or on a couch with the leg well raised. He had a good night, being comparatively free from pain in the ankle.

On No. 29th. in the morning, the bandages, etc. were removed and massage applied to the injured parts. The patient was directed to have the parts well rubbed again in the evening by a friend of his who had some ambulance training. He remarked that the ankle felt wonderfully easy and not at all so stiff as he had expected.

He had another good night's rest and when I saw him again on Nov. 30th. the foot and ankle were well massaged. He expressed the great feeling of relief from pain and stiffness afforded by the short time of massage to which he was subjected.

When seen again on Dec 1st. however, he had quite a different history to relate. He had been feeling sick all the morning, shivering, etc., Had been restless since about 4 a.m. when he awoke. He now - about 11 a.m. - had a temperature of 101.8"F. Pulse 91. Tongue slightly furred. Pains in back, limbs, eyeballs, forehead, temples, and at the back of neck, with slight sore throat. He was "at a loss to know how he had got cold as he had not been out of the house, nor had he done anything that could make him feel so ill." There was a tendency to perspiration, etc. He had felt so sick, cold and giddy, that he had remained in bed till the Doctor would come. The diagnosis of Influenza, from the sudden onset, and the character of the symptoms, was made, and the patient was told to keep quietly in bed. Light diet, milk, barley water, etc. A mixture of Acetate of Potash, Tincture of Aconite was given and Phenacetin powder, grains VII night and morning.

The pains were not materially increased

during the day, the perspiration after the first few doses of medicine was somewhat profuse and the patient felt quite exhausted. He passed a restless night and when seen again on Dec. 2nd. the temperature was 100 2"F. Pulse 89.

Throat was painful, slight, dry, hard cough.

Pain at breast-bone, and across the shoulders.

Pains in eyes increased by light or attempts at reading.

On Dec. 4th. the temperature fell to normal and never rose again above that point.

In this case the effect of the Influenzal attack appeared to have no marked ill-effects on the injured parts beyond the fact that there appeared a little extra stiffness - more than there was before the onset of the Influenza.

He returned to work feeling somewhat shaky and in opposition to advice on Dec. 13th. 1895. He felt extremely tired after the day's work was over for several weeks but managed to struggle along without any definite relapse.

The following case is an interesting example of Influenza following an accident when, from the time of the onset of the initial symptoms of the Influenza I was able to calculate the occurrence of accident and the time of the occurrence of accident.

Case R. T., aet 45 years, came to the Surgery about 9.30 a.m. on Saturday Jan. 12th. with a history that he had been feeling queer since he got up at 6.30 a.m. He vomited, had great tendency to fall forward, shivered, and had some pain in the lumbar region. Tongue showed only a very slight fur. Pulse 76 per minute - weak but regular.

The case was looked upon as one of indigestion trouble, the patient having previously had some stomach irregularities. He was a builder by trade, a non-smoker, and an extremely temperate man. An alkaline stomachic, Soda, Nuc.Vomic., Gentian, etc., was prescribed and the patient told to take as much rest as possible and report

himself in a few days. However, in the afternoon he sent for us to call as he felt worse. I found him in bed, cold and shivering. He complained of being aching in every bone of his body and sick, with a sore throat. Temperature was 102 7. Pulse 81. The case was diagnosed as Influenza and in addition to the medicine prescribed he was given Phenacetin.

Owing to his complaining of a rather unusual amount of pain on the right side over the lower ribs anteriorly and extending down the right arm I was led to make a careful and thorough examination of the chest with, however, a negative result. On enquiry as to having had the side injured a negative reply was given. As I was still at a loss and could not find physical signs for the amount of tenderness and pain I endeavoured to trace the work of the last few days over with the patient.

Calculating that Influenza in many cases occurred at a period 2½ days after an accident, and that patient had noticed the first

symptoms, sickness, giddiness, etc., on getting out of bed in the morning shortly after 5 a.m. I asked him what he was doing about 5 p.m. on Wednesday, Jan. 9th. He replied that he would be leaving off all work for the day at that time, and laughed at the suggestion that he had done something then or about that time that either injured him or caused him to over-exert himself. Such a history threw no light on the injury or on the starting point of the illness.

I saw the patient again on Jan. 13th. He had passed a very restless, feverish, night, sickness and shivering still troublesome. Pains in limbs about the same. Temp. 101 3. Pulse 86. One of his workmen had called for orders, etc., in the morning and the patient told him as a joke how the Doctor was trying to make out that he had met with an accident on the Wednesday previously. This conversation, however, brought about not only a recollection in the patient's mind that the accident had occurred, but also the time and place when and where it had occurred.

Just as the majority of the patient's workmen were leaving a new house that was being plastered, the patient and the workman referred to stayed behind to take some measurements and make some arrangements about the next day's work. While so engaged the patient stumbled on a plasterer's rake and shovel and fell, catching his side on a pile of flooring material lying near at hand. He felt little the worse at the time, and in fact took no notice of the accident, and felt no results next morning. The workmen stopped work about 5 p.m. and the accident would occur very shortly after that time. Now the usual period, two and a half days, almost exactly elapsed between the date of the accident and the onset of the Influenzal symptoms. The patient was now ordered Acetate of Potash mixture and to rest quietly.

Jan. 14th. Temperature normal. Pulse 75. Patient had a better night but felt tired and languid. Appetite little better. Bowels moved

in the morning. Water high-coloured, but contained no albumen.

The progress of the case was slow but satisfactory till he wrote some business letters, and a relapse occurred Jan. 29th., 17 days from time of onset of the original symptoms. His memory was considerably affected for some time, in fact, when questioned as to what he had been doing before the relapse came on he replied that he had done absolutely nothing that he was not allowed to do and only had the letter-writing brought to his recollection by his daughter who had helped him with the letters.

He went to Harrowgate for a time after he was well enough to travel and returned feeling much better and the memory somewhat better.

Such cases illustrate that Influenza is liable to follow even small accidents and at a period of two and a half days. This time I have found to be quite as constant and characteristic as the time of occurrence of Influenza after confinements.

DIAGNOSIS OF INFLUENZA.

The diagnosis of Influenza in the majority of instances is not a matter of great difficulty. In treating of the diagnosis of Influenza here it is somewhat unnecessary to discuss the cases of slight nasal catarrh, etc, that might with advantage be classed as "Fashionable Influenza". Such may occur at times peculiarly convenient to the sufferers and require little or no medical skill for recognition.

If the sudden onset of the attack is borne in mind together with the characteristic type and seat of the pains, etc, little or no difficulty should be experienced in cases where no complication occurs. The equally sudden departure of the acute stage and the amount of intense prostration, together with the character of the pulse, especially the absence of all relation to the temperature, also give useful clues to the diagnosis. In some cases there is often a likeness to a Rheumatic state but in the latter the feverish stage lasts longer and is more acute. The pains of Influenza are more widely distributed and

apart from the articulations. In Rheumatism the pains are of a more deep-seated nature than in Influenza.

As has already been mentioned there is often such a resemblance in symptoms between Influenza and some other feverish states, e.g., Typhoid, that it is only possible to form an opinion after the case has been watched for several days.

Diagnosis between Influenza and some Puerperal states, e.g., Puerperal Septicaemia.

Both are liable to occur between two or three days after confinement. In Puerperal Septicaemia the onset is insiduous, gradually increasing in severity, there is much greater increase in the pulse rate, lochia generally suppressed, or altered in character, frequently highly offensive in odour, milk secretion often arrested. In addition there are usually symptoms more or less referable to a pelvic origin, e.g., Uterine Tenderness, etc., this state lasting in acuteness for a week or more.

In Influenza the onset is sudden, crisis, often rapid, duration of acute stage short, lochia as

a rule not suppressed, no foul odour, not infrequently increased in quantity. Milk supply not materially interfered with.

Diagnosis between Influenza and Milk Fever.

The symptoms when once established have many points in common. In Milk Fever, however, the symptoms come on as the milk supply is being established and are relieved as soon as the breasts are drawn.

Reference has been made to the diagnosis of the complications under the various systems described.

PROGNOSIS OF INFLUENZA.

The prognosis varies according to the severity type and complications of the attack and according to the previous history of the patient. Where there is pre-existing cardiac or pulmonary disease a more careful and reserved prognosis must be made. In alcoholics the prognosis of any complication is always somewhat doubtful. In children, as a rule, the

prognosis, even in complicated cases, is good. In aged people the prognosis is less certain and somewhat more grave.

TREATMENT OF INFLUENZA.

Treatment with the object of preventing the onset of an attack up till the present time must be looked upon as almost unknown. Numerous observers have written from time to time proclaiming in definite and confident terms that such and such remedies used by themselves well nigh approach to being "specifics". It would appear, however, that "Medicine" must wait the further developments and researches of "Pathology" before adopting such hard and fast hypotheses in the matter of treatment.

We can aim to a certain extent at treatment of a preventitave nature by avoiding contact when possible with the disease, adopting measures based on sound hygienic principles, attending carefully and regularly to matters of diet, rest, exercise, work, etc., avoiding as much as possible during an epidemic

any unnecessary fatigue or exposure.

After the attack is established, however, it is possible to do something to mitigate the suffering and probably cut short the course of the disease.

Above all things it is important not to ignore the disease or to treat it too lightly. Many are prone to imagine that they can get over it "as they would an ordinary cold", without any treatment, medicinal or otherwise. Rest should be enforced as a part of the treatment as soon as the disease is recognised. In many instances complete rest is inconvenient but must be enforded as far as circumstances will allow.

Rest in bed when the attack is at all well marked for a couple or more days is highly important for several reasons, for example,- during the feverish stage the patient, if in bed, is enabled to keep at a more even temperature than if going about, hence the increase, unnecessarily, of tissue waste is avoided and the resulting debility is lessened.

Another important reason for endeavouring to get rest in bed is that by such means the spread of the disease is to a certain extent prevented. This attempt at rest in bed as an "isolating process" is all the more important in dealing with patients who in the course of their duties or otherwise would be thrown in contact with a number of individuals, for example in the case of schoolmasters, clergymen, etc., and in the case of patients of a weakly constitution, or patients who live so to speak in the midst of a family, some of whose members are of a delicate constitution.

In addition to the general rules of good hygiene must be attended to as far as circumstances will allow, e.g., free ventilation of sick room, fumigation of same once or twice a day with sulphur or some other disinfectant. As the Pathological views of Influenza's causation tend to its microbic origin and to such organisms being found in the Bronchial secretions, all handkerchiefs, etc., used by the patient must be promptly and carefully disinfected. It is preferable, more especially in the

more severe pulmonary complications, to use pieces of rag, etc., that can be burned immediately after use.

It is only in a small minority of Influenzal cases that such rigid measures can be carried out.

DIETETIC TREATMENT

In no class or condition of disease must the dietetic treatment be arranged more on individual requirements and tastes. The appetite is extremely variable, sometimes increased or little altered, more often wanting entirely, or exhibiting peculiar tastes and cravings.

In the milder attacks there is no great indication for a special dietary, although it is highly important in such mild cases to impress upon the patient the necessity of not only regular but frequent meals and in small quantities at a time.

In the more acute cases the attention to the diet is not to be overlooked. The indications one gathers from cases is that the strength must be

kept up by whatever means possible. We are apt in our anxiety for the accomplishment of this to overdo the feeding and increase many of the symptoms.

During the feverish stage in all cases I consider it advisable that the nourishment should be of a liquid nature, e.g., gruel, milk, milk & soda water, milk & Barley water, Bovril, Bovril & gruel combined (this is a combination much relished by many patients, in fact, many who cannot take the Bovril or gruel alone can take the two together with some amount of relish,) chicken or mutton broth, or any of the meat juices in the market, e.g., Valentine's, Liebeg's.

One preparation I have found exceedingly useful and reliable, not only during the feverish stage, but in cases of pulmonary complication or slow convalescence, is Carnick's Liquid Peptonoids. Often I have found cases where almost everything else was rejected by the stomach. In children, as well, it can be given with great advantage either alone or in milk, and is a much more suitable stimulant than alcohol.

If the nutriment is of a liquid character and given frequently and regularly during the acute stage I think it matters little what the special form is given, such may be left to the patient's taste in many instances. Once the temperature has fallen to normal we may with safety allow a little solid food, not to replace, but to augment, the liquid nourishment, e.g., fish, chicken breast, etc. Later a little mutton chop lightly cooked may be allowed.

As regards alcoholic stimulants I think that it is advisable in the febrile stage to omit them. Frequently the administration of even small quantities increases the head symptoms. The same result is produced by liquid or solid nutriment in too large quantities.

When severe complications, more especially of a pulmonary nature, supervene, the state of the pulse, etc., must guide one in deciding as to whether they should be given or not.

MEDICINAL TREATMENT.

A most fallacious idea exists in the minds of some patients that by taking certain drugs, such as Antipyrine, etc., they can either prevent or cut short the attack. Nothing could be more dangerous and injurious to the aftercourse of the disease in many instances. Such are the class of people who make light of the disease and either do not seek medical advice or seek it only when it is frequently too late. The result of their treatment is only to increase the depression that the attack produces. They entirely omit to consider any attempt at counteracting such depression.

The number and variety of the drugs advised by medical men at the present time in the treatment of Influenza is brought about, not so much by idiosyncrasy on the part of the patients (though such may occasionally influence the administration of drugs) as by the tendency for each medical man to look upon his special treatment as "a specific for Influenza".

We must admit, and it is well perhaps that we are compelled to do so, that as yet we can bring forward no drug or combination of drugs having any claim to a specific action. My endeavour all through my cases of Influenza has been more to adopt drugs suitable to the individual than to administer the same on the principle of "cure one, cure all." In cases exhibiting special complications such treatment has been carried out more especially. It is possible, however, to have a general basis of treatment in nearly all cases and to add to it as occasion requires.

The Potash Salts, and more particularly the Acetate of Potash, have, in my experience, given the most satisfactory results in treatment of Influenza.

Acetate of Potash, being a mild saline, easily soluble in water, is easily administered. It is moreover not used in the stomach and there is almost no chance of Potash poisoning attending its use. The depressant action on the heart of the Potash Salts is less frequently seen, I believe, with the Acetate than with any other of the group. The importance of such is at

once realised when we refer to the tendency to depression of the heart attending the attack. The great value of the Acetate lies in its power of increasing alkalinity and in its diuretic action. The diuretic action can be increased if necessary where there is a tendency to cardiac weakness, etc., with backward pressure symptoms by combining with the Acetate the Tincture or Infusion of Digitalis. The action of the Acetate is recognised as valuable in Rheumatism and I think it is none the less valuable in Influenza than in Rheumatism. The Potash Salts in addition have a much greater effect in dissolving uratic deposits than the Soda Preparations.

I find it best given in doses for adults of 10-15 grains every 3 hours in a large quantity of water or barley water. Should there be a tendency to sickness after its administration that can be quite easily counter-acted by a large quantity of water being taken with the mixture, or a little hot water taken after the mixture. The slightly acrid taste of the Acetate is easily covered by Camphor Water, Chloroform Water, etc.,

Tincture of Aconite. may in some cases be combined with the Acetate of Potash, where there is no heart disease, to reduce the temperature and for the relief of certain of the neuralgic symptoms. It aids the establishment of perspiration and also stimulates the kidney secretion. In cases where Tonsillitis occurs with Influenza the Acetate and Aconite if pushed give good results and quickly reduce the swelling, even where that is extreme. In the earliest stages of the Pneumonic process Aconite is also invaluable.

Salicylate of Soda may be given in early acute stages when pain is urgent; but more than 2 or 3 moderate doses in succession should not be given because of its depressant action. It has been highly spoken of by various writers but my experience of its depressing effects does not seem to warrant its use except as stated above.

Phenacetin. has in my experience given most gratifying results from its use as Antipyretic and Analgesic. The action is quickly attained, but rapidly passes off. The great drawback to ids administration is its in-

solubility in water; but it can be given in wafer paper or, being practically tasteless, can be placed on the tongue and swallowed with a drink of water, etc. Its after effects of an injurious nature are practically nil. In a few cases I have seen profuse diaphoresis but never the slightest trace of a depressing action on the heart. It can be given with great benefit and safety to children. Frequently, more especially in children, it helps in producing sleep of a refreshing character. None of the other Antipyretics, e.g., Antipyrine, Antifebrine, are so certain in their action - doubtless some produce more lasting results - and none are so free from bad after effects. Its special use in Influenza appears to be in the relief of the head symptoms, even where the pain is not urgent Phenacetin relieves the sense of weight and giddiness in the head. If given regularly and continuously it has in combination with the Acetate of Potash mixture a decided influence on the limb pains.

Seldom have I had to resort to Antipyrine because of the failure of Phenacetin. Antifebrine

is so extraordinarily irregular and uncertain in its action that I do not consider it worth even a trial in Influenza if any Phenacetin or even Antipyrine can be obtained.

For an adult I give of Phenacetin 7 grains every four hours, while pains and fever are urgent, then every six hours. After the acute stage is over it may with advantage be given at bed-time, to relieve any headache and to induce sleep, and in the morning if head aches.

In children, under 5 years, I give one grain every 4 or 6 hours, over 5 and under 8 years, 2 to 3 grains, over 8 and under 13, 3 to 4 grains.

When the irritable, restless, feverish state is found in children, more particularly at night, I have found Phenacetin to act exceedingly well.

Henry, Y. 1/91 - P. 1282 - speaks highly of the value of Phenacetin, especially in the first stage, he says "Many aptients state that they received more benefit from the powder than from anything else."

Clemon,, Y. 2/91 - P. 1383 - says "the rapidity with which the pains are relieved is very striking, the bad symptoms are nil ..... I am convinced of the great efficacy and usefulness."

In Brit. Med. Journ., Vol.I. '94 we read "Studies in Therapeutics" (Editorial).

"In Phenacetin a claim to freedom from ill effects put forward on its introduction has been justified in a comparative sense by experience, the diaphoresis may be unpleasant, rendering habitual use in Typhoid harmful. We meet with all the ill effects of the aromatic group but to a less extent.

Betts., Y. 1/96, reports a case where an unusual result of the administration of Phenacetin was noticed but the patient recovered completely.

"Patient was ordered a powder subsequently ascertained to be Phenacetin. Inspiratory Dyspnoea, Shivering, Dark Mahogany Wheales appeared on parts of body not covered by clothes."

During the stage of convalescence various drugs are useful and the individual requirements of

the patient must guide us in selection. Such drugs, however, as Nuc.Vom., Cinchona, Ammonia, Iron, Quinine, are generally found useful.

In 1874, Watson wrote "I know of no drugs so useful as tonics for such (in Influenzal) patients as the Sulphates of Quinine or of Iron.

Kreat Halviva., I have used this drug for some time in the latter stages of convalescence. As a promoter of the appetite and bitter tonic I have found it invaluable. I believe there is something more in its action than a mere "bitter tonic". It has been found useful in Malaria.

Hunter. Y. 1/91 - 1160 - writes of it "Useful in Influenza of a malarial character."

A tincture is prepared of which the dose is 5 to 10 minims repeated 3 or 4 times a day. In some of the Influenzal headaches it gives relief. For Malarial Fever the dose recommended is 15 to 50 minims every 3 hours.

The Treatment of Special Symptoms must of necessity depend on the nature of such symptoms. I shall only

refer briefly to a few, viz.,

Earache. Exalgine in doses of 1 to 1½ grains repeated if necessary in half an hour seldom have failed to give relief.

In Sore Throats. Pulv.Gum.Guaiaci is useful given in milk. It also aids diaphoresis, is a slight laxative, and is useful in Neuralgias. Sulphar is also useful for sore throats.

Codeia. is useful in some Bronchial complications, e.g when the cough is urgent. The expectorant action is also useful. In abdominal pains, such as are met with in the Gastric type of Influenza, it appears specially useful. It is best given in the form of a pill ½ grain doses, or as a Syrup.

Hamamelis - Already noted under Eye treatment.

Belladonna. In the Dysmenorrhoea sometimes met with in Influenza is useful. Also useful in coughs of a spasmodic nature and to relieve the irritation of some of the skin rashes met with in Influenza.

Antikamnia - a recent introduction into the list of drugs in doses of 5 grains repeated if necessary in 5 minutes, then half an hour's time, has given satis-

factory results. As, however, its composition would appear to be "Antifebrine with an alkaline carbonate" we must use discretion in its administration till its action on the heart is more definitely ascertained.

It is hardly necessary to enter more fully into details of treatment in the after or convalescent stage than has already been done. One might mention, however, the benefit frequently to be obtained, especially when convalescence is slow, from a change of air. From here I have noticed great benefits from even a 10 day's or fortnight's stay at Ilkley, Harrowgate, Grange-on-Sands, etc., etc.

In children the treatment is on the same lines as in adults. It is often advisable to help their weakened digestion with Malt Extract and to endeavour to repair their waste by the administration of plenty of good food, milk, etc., and such drugs as Parrish's Syrup, Syrup of the Iodide of Iron, etc.

While not entering into detail in many matters in the course of this thesis I have endeavoured to describe some of the more important and special symptoms and relationships that I have noticed during the course of my practice in West Hartlepool from 1892 to the present year and have quoted a few cases such as were capable of illustrating the points referred to. Wherever possible quotations have been acknowledged with full references.

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William Gray

April 1896